

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

A SIMMONS-BOARDMAN PUBLICATION

Vol. 46.

CONTENTS FOR DECEMBER, 1928

No. 3.

COPYRIGHT, 1928, BY AMERICAN BUILDER PUBLISHING CORPORATION

Around the Family Table.....	61	Auditorium, Stage and Gymnasium Combined in This School Building.....	92
Some Good Natured Philosophy for Builders.		Using the Plumb Bob.	
Editorial Page	63	For Framing Garage Doors.	
Everybody's Business—By Floyd W. Parsons..	65	Plug That Won't Pull Out.	
More Science More Business Hazards.		Method of Aging Shingles Given.	
Building Houses Fit for Heros.....	67	Leak-Proof Casements.	
Government Housing Activities in Great Britain.		A Flooring Laying Aid.	
Effective Use of Expanded Steel and Concrete Re-inforcing		Stopping Window Leaks.	
Home Buying Through Monthly Bank Pay- ments	74	Repairing Old Doors.	
The Longest Residence.....	76	Instructions in Roof Framing.....	96
Demonstrating the Finest in Beauty and Serv- iceability	77	A Summary of Fundamentals.	
The Beaumont, Texas, Ideal Home.		Meeting the Winter Payroll by Increasing Winter Work	98
Apartment Homes	80-82	News of the Field.....	100
A Four-Flat Building for a Shallow Lot.		Contractor Built Houses.....	101
900 Michigan Avenue North Apartments—A Large Group of Small Units.		What's New	106-108-110-112-117-118
Nine 3-Room Apartments on 33 x 63 Feet.		Electric Calculating Machine.	
COLORKEED HOME PLANS	84-86	Friction Hinges for Casements.	
The Fallston	Colorplate I	Heavy Duty Electric Hand Saw.	
A Popular Stucco Design for a Narrow Lot.		Economical Building Units Serve as Form for Rein- forced Concrete and as Wall Insulation.	
Two Quick-Selling Homes.....	Colorplate II	Modern Heating Units.	
The Gilead—A Five-Room Frame Cottage.		Spray Outfit for All Finishes.	
The Giltedge—A Smart Six-Room Stucco Design.		A New Electric Device.	
The Fletcher	Colorplate III	Steel Cabinet and Range Units.	
A Seven-Room Brick Dutch Colonial.		A Concrete Plant Mixer.	
The Frederick	Colorplate IV	Accurate Measuring Tanks.	
A Charming English Home Design.		Utility Saw with New Features.	
Our Front Cover Home.....	87-91	Metal Weatherstrips Improved.	
Photograph and Complete Set of Working Drawings to One-Eighth Inch Scale of the Prize-Winning Two Apartment Building Illustrated in Full Colors on Our Front Cover.		Steel Windows in Steel Frame House.	
		Positive Control of Garage Doors.	
		New Rule Simplifies Estimating.	
		Motor Trucks and Trailers.....	120
		Some Pointers on the Care of Motor Trucks.	
		Books, Bulletins and Catalogs Reviewed...126-128	
		Advertisers' Index	179-181

Published on the first day of each month by American Builder Publishing Corporation. *Chairman of Board*, Edward A. Simmons; *President*, William A. Radford; *Treasurer*, Henry Lee; *Secretary*, Roland D. Radford; *Assistant to Chairman*, William A. Radford, Jr.; *Editor*, Bernard L. Johnson; *Eastern Editor*, Charles G. Peker; *Advertising Staff*: Delbert W. Smith, C. R. W. Edgcumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement.



Publication Office:
Bankers Building, 105 W. Adams St., Chicago
Telephone: Randolph 0794

Branch Offices:

New York—120 West 42nd Street.
Cleveland—6007 Euclid Avenue.
Washington—17th and H Streets, N. W.
San Francisco—215 Market Street.

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of March 3, 1879. Additional entry as second-class matter at Binghamton, N. Y.

SUBSCRIPTION RATES—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copy, 35 cents. Foreign countries, \$4.00.

PROTECTION FOR OUR READERS—The publishers of the **AMERICAN BUILDER** reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the **AMERICAN BUILDER**."

ADVERTISING RATES—Furnished on application. Advertising forms close on the 10th of the month preceding date of publication.

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

A SIMMONS-BOARDMAN PUBLICATION

Vol. 46.

CONTENTS FOR DECEMBER, 1928

No. 3.

COPYRIGHT, 1928, BY AMERICAN BUILDER PUBLISHING CORPORATION

Around the Family Table.....	61	Auditorium, Stage and Gymnasium Combined in This School Building.....	92
Some Good Natured Philosophy for Builders.		How Dan Does It.....	94-95
Editorial Page	63	Using the Plumb Bob.	
Everybody's Business—By Floyd W. Parsons..	65	For Framing Garage Doors.	
More Science More Business Hazards.		Plug That Won't Pull Out.	
Building Houses Fit for Heros.....	67	Method of Aging Shingles Given.	
Government Housing Activities in Great Britain.		Leak-Proof Casements.	
Effective Use of Expanded Steel and Concrete Re-inforcing		A Flooring Laying Aid.	
Home Buying Through Monthly Bank Pay- ments	74	Stopping Window Leaks.	
The Longest Residence.....	76	Repairing Old Doors.	
Demonstrating the Finest in Beauty and Serv- iceability	77	Instructions in Roof Framing.....	96
The Beaumont, Texas, Ideal Home.		A Summary of Fundamentals.	
Apartment Homes	80-82	Meeting the Winter Payroll by Increasing Winter Work	98
A Four-Flat Building for a Shallow Lot.		News of the Field.....	100
900 Michigan Avenue North Apartments—A Large Group of Small Units.		Contractor Built Houses.....	101
Nine 3-Room Apartments on 33 x 63 Feet.		What's New	106-108-110-112-117-118
COLORKEED HOME PLANS	84-86	Electric Calculating Machine.	
The Fallston	Colorplate I	Friction Hinges for Casements.	
A Popular Stucco Design for a Narrow Lot.		Heavy Duty Electric Hand Saw.	
Two Quick-Selling Homes.....	Colorplate II	Economical Building Units Serve as Form for Rein- forced Concrete and as Wall Insulation.	
The Gilead—A Five-Room Frame Cottage.		Modern Heating Units.	
The Giltedge—A Smart Six-Room Stucco Design.		Spray Outfit for All Finishes.	
The Fletcher	Colorplate III	A New Electric Device.	
A Seven-Room Brick Dutch Colonial.		Steel Cabinet and Range Units.	
The Frederick	Colorplate IV	A Concrete Plant Mixer.	
A Charming English Home Design.		Accurate Measuring Tanks.	
Our Front Cover Home.....	87-91	Utility Saw with New Features.	
Photograph and Complete Set of Working Drawings to One-Eighth Inch Scale of the Prize-Winning Two Apartment Building Illustrated in Full Colors on Our Front Cover.		Metal Weatherstrips Improved.	
		Steel Windows in Steel Frame House.	
		Positive Control of Garage Doors.	
		New Rule Simplifies Estimating.	
		Motor Trucks and Trailers.....	120
		Some Pointers on the Care of Motor Trucks.	
		Books, Bulletins and Catalogs Reviewed...	126-128
		Advertisers' Index	179-181

Published on the first day of each month by American Builder Publishing Corporation. *Chairman of Board*, Edward A. Simmons; *President*, William A. Radford; *Treasurer*, Henry Lee; *Secretary*, Roland D. Radford; *Assistant to Chairman*, William A. Radford, Jr.; *Editor*, Bernard L. Johnson; *Eastern Editor*, Charles G. Peker; *Advertising Staff*: Delbert W. Smith, C. R. W. Edgcumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement.



Publication Office:
Bankers Building, 105 W. Adams St., Chicago
Telephone: Randolph 0794

Branch Offices:

New York—120 West 42nd Street.
Cleveland—6007 Euclid Avenue.
Washington—17th and H Streets, N. W.
San Francisco—215 Market Street.

Entered as second-class matter July 1, 1905, at the post office at Chicago, Ill., under the Act of March 3, 1879. Additional entry as second-class matter at Binghamton, N. Y.

SUBSCRIPTION RATES—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copy, 35 cents. Foreign countries, \$4.00.

PROTECTION FOR OUR READERS—The publishers of the **AMERICAN BUILDER** reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

Be sure in writing to advertisers to say: "I saw your advertisement in the **AMERICAN BUILDER**."

ADVERTISING RATES—Furnished on application. Advertising forms close on the 10th of the month preceding date of publication.

MEMBER OF THE AUDIT BUREAU OF CIRCULATIONS

LET

TRUSCON

TWENTY-FIVE YEARS OF PIONEERING & LEADERSHIP

SERVE YOU

Truscon offers for your consideration + years of experience in practical building + a close knowledge of the problems of the modern builder + the only complete line of fireproof building products in the world ever manufactured by one concern + an engineering service covering all problems of modern, permanent building to supplement your own organization + a warehousing service that is nation-wide and puts the entire commodity line within a few hours of any building site + and finally, the basic desire to give every possible cooperation.

TRUSCON STEEL COMPANY, YOUNGSTOWN, O.

Established 1903

Warehouses and Engineering Offices in All Principal Cities

Factories in Youngstown, Cleveland, Los Angeles
The Truscon Laboratories, Detroit, Michigan

The Complete Truscon Line of Steel Building Products includes

**STEEL WINDOW
PRODUCTS**

Pivoted
Continuous
Double-Hung
Donovan Awning Type
Counterbalanced
Projected
Mechanical Operators
Steel Casements
Basement Windows
Steel Frames

STEEL DOORS

Swing and Slide
Vertical Folding
Vertical Lift
Vertical Lift-Swing
Airplane Hangar

**METAL LATH
PRODUCTS**

A-Metal Laths and
Hy-Rib
Lath Accessories
Metal Trim

**REINFORCING
STEEL**

Steel Forms
Floretypes
Locktyle
Welded Steel Fabric
Contraction Joints
Steel Road Forms

STEEL POLES

H-Frames
Towers

**MAINTENANCE
PRODUCTS**

Waterproofings
Technical Paints
Floor Hardeners
Cement Roofing Tile

STEELDECK ROOFS

Insulated and
Waterproofed.

STEEL JOISTS

P-G (Plate Girder) Type
O-T (Open Truss) Type

**PRESSED STEEL
SPECIALTIES**

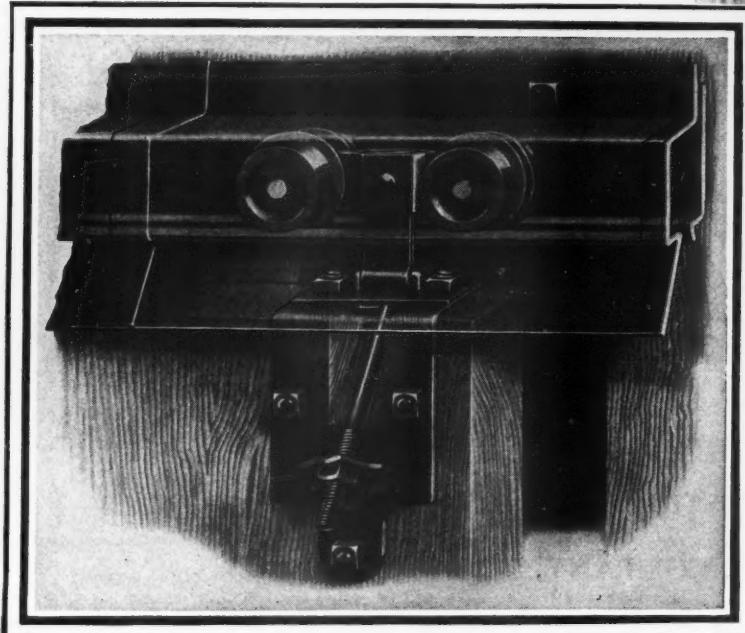
Lifetime-Troublefree-Service!

That's what you deliver when you sell or install the R-W door hardware described on this page.

These hangers and track are carefully engineered to insure that doors—the most important part of any building—will always give satisfactory service.

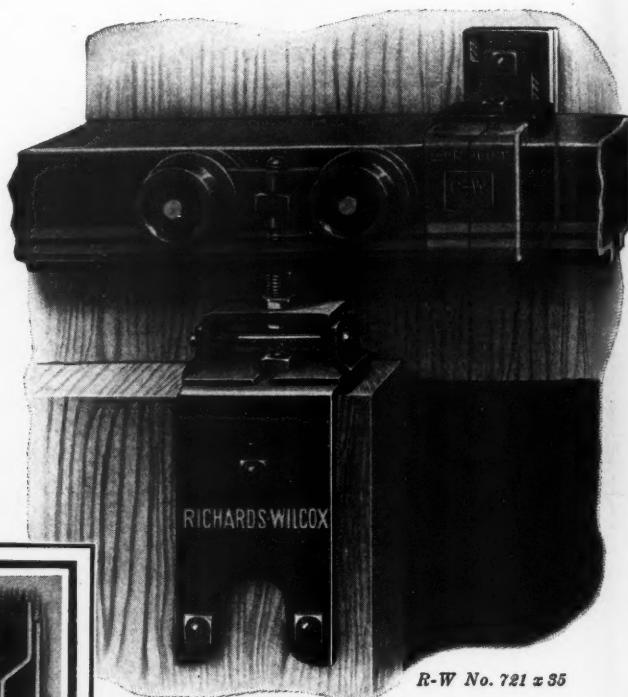
No. 721 hanger with No. 35 track. A flexible joint hanger with steel wheels and roller bearings. Both lateral and vertical adjustments are provided. The apron is hinged and adjustable to door thickness.

Heavy 14 gauge steel is used for the self cleaning track. The new patented lock-joint center bracket and blind end bracket keep track in perfect alignment and clear at all times. Finished in baked black enamel or galvanized.



R-W No. 423 x 36

Better dealers everywhere feature the R-W line of door hardware—the largest and most complete made.
Send for complete catalogue



R-W No. 721 x 35

No. 423 hanger with No. 36 track. This hanger is of the same high grade construction and embodies the same features as No. 721. It differs only in the method of vertical adjustment which is easily accessible and the hanger can be used with No. 35 track.

The storm-proof track is 14 gauge—self cleaning type. A wide apron and blind ends insure against the ravages of weather and birds. Furnished in galvanized or baked enamel finish.

Richards-Wilcox Mfg. Co.
A Hanger for any Door that Slides.

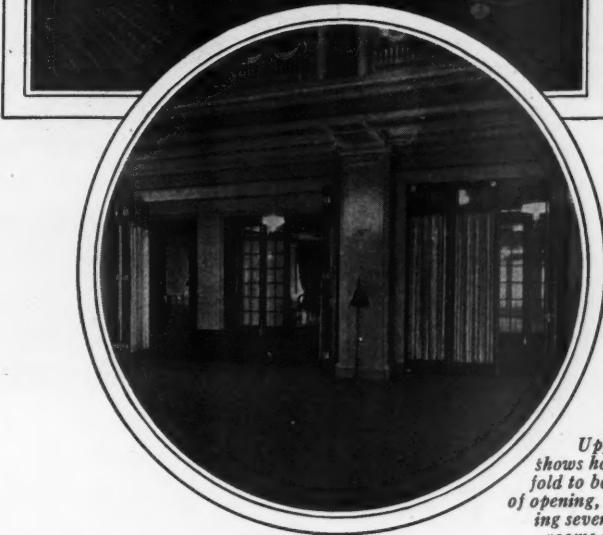
New York . . . AURORA, ILLINOIS, U.S.A. . . . Chicago
Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
Montreal • RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. • Winnipeg

ice! with FOLDER-WAY rooms do double duty



FoldeR-Way illustrated here is particularly suitable for doors of medium weight. Doors are carried by ball-bearing hanger running in overhead track.

Shown below are doors opened and closed. Note how they fold out of the way.



Upper view shows how doors fold to both sides of opening, converting several small rooms into one.

WITH property values up and rising, practical men hesitate to set aside valuable space for occasional use. And there is no need.

FoldeR-Way partition door hardware is the economical and convenient solution of the problem. With doors closed, rooms remain separate units; open and folded out of the way, a single, spacious room that quickly meets emergency needs.

FoldeR-Way is ideal doorway equipment for hotels, churches, auditoriums, gymnasiums or lodge halls. Noiseless, easy-operating doors that do not sag or rattle or stick—just like folding up an entire wall.

Richards-Wilcox doorway engineers will be glad to serve you.

Richards-Wilcox Mfg. Co.

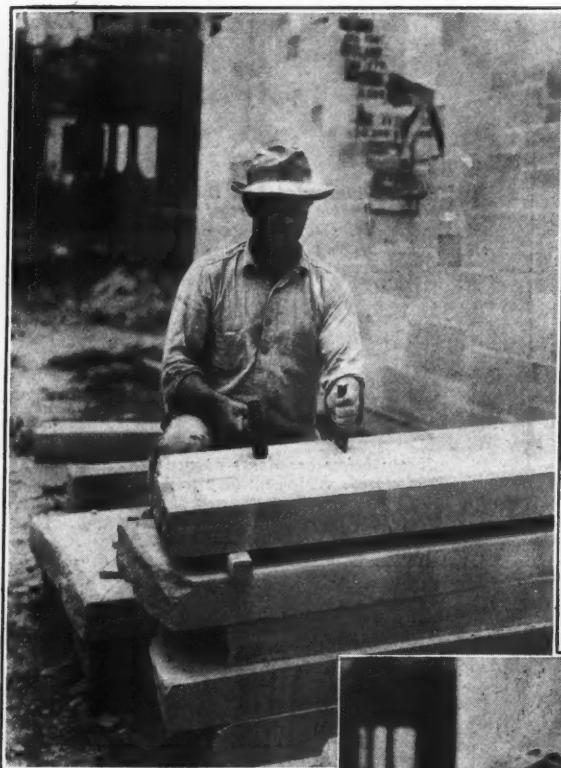
A Hanger for any Door that Slides.

New York AURORA, ILLINOIS, U.S.A. Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
 Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
 Montreal . . . RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. . . Winnipeg

LARGEST AND MOST COMPLETE LINE OF DOOR HARDWARE MADE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Here's the Sawed Stone



(Above) Preparing Indiana Limestone Random Ashlar with aid of coping tool. Note opening in wall showing construction. Here stone is being used as structural facing over hollow tile.



(Right) This man is using portable electric carborundum saw for cutting the groove across the stone. Little more than a scratch is necessary and an ordinary hand saw or buck saw can be used if preferred.



FREE

These free booklets show many fine Indiana Limestone houses built at a cost only 5% to 6% greater than if other materials had been used. Write for them today. Use coupon on opposite page.

INDIANA LIMESTONE COMPANY, General Offices: BEDFORD,

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

... and Here's the Result



Residence, Terre Haute, Indiana. Built of Variegated Indiana Limestone Random Ashlar. We ship this stone all over the country. Leading buildings in New York, Chicago and all principal cities are constructed of Indiana Limestone.

HOUSES of beauty unlike anything on the market today! Easy to sell . . . moderate in cost . . . making a substantial profit and building a reputation for the contractor!

Such is the story of Indiana Limestone Random Ashlar construction, the amazing new way of using limestone which brings this beautiful natural material well within the reach of the average home-builder. Contractors the country over are now starting to build houses of our stone. We will help you get started. With our resources of over \$46,000,000 and branch offices in all principal cities, we are in a position to give you every possible assistance in using Indiana Limestone.

Why not write at once for our literature and learn the full story? Here is the sort of profit opportunity you may be looking for. One that is out of the run of ordinary competition. Let us tell you about it. Just fill in, clip and mail the coupon and we will send you full information by return mail. No obligation. Do it now.

Box 757, Service Department,
Indiana Limestone Company, Bedford, Indiana.

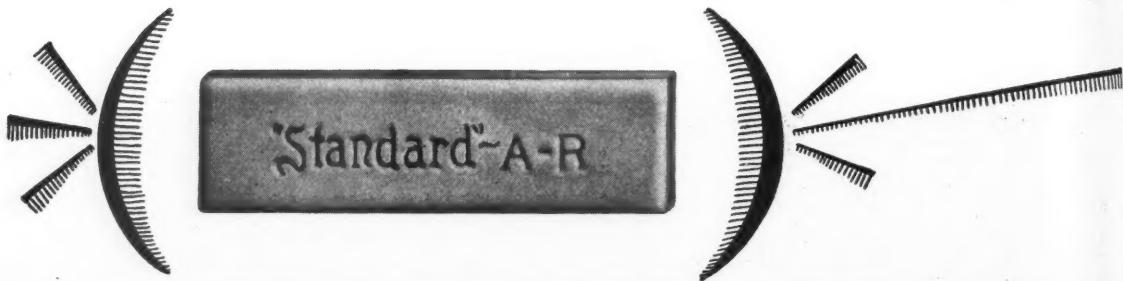
Send me full information on Indiana Limestone for Random Ashlar facing for residences.

Name _____

Address _____

City _____ State _____

INDIANA • Executive Offices: TRIBUNE TOWER, CHICAGO



The "THREE 8's" SINK



This hand-wrought faucet of beautiful octagonal design, with swinging-spout, is finished in Chromard, a metal finish which has the sheen of platinum and cannot tarnish or corrode.

8 -inch low back fits snugly under a deep window.

8 -inch deep sink is roomier; prevents over-the-rim splashes.

8 -inch deep front gives the whole sink a new beauty.

"Standard"
PLUMBING FIXTURES



The directly attached garbage container of vitreous china with removable aluminum receptacle. Also made for installation with sinks other than the "Three 8's."

A mark of distinction for the better home

WHETHER it is evident or not, there is a little thrill of expectancy in every woman's heart as she is about to cross the threshold into the kitchen of what may be her future home. Here is her "workshop", and she is of the new generation that expects and demands modern "tools" with which to work efficiently. In this one room many a deal is closed—or lost! Before she discovers the latest mechanical refrigerator in the pantry—yes, even before she notices that the range has the new oven regulator—she has seen the sink and mentally measured its desirability.

And ten to one she knows a "Standard" "Three 8's" Sink the instant she sees it. Its perfectly-proportioned 8-inch back, 8-inch front and 8-inch deep sink compartment smile at her frequently from the pages of her favorite magazine. In common with millions of other housewives, she is being educated by "Standard" national advertising to the comfort and convenience of this "Three-8's" Sink, and to the superiority of Acid-Resisting Enamel, of which it is made—the enamel which resists not only fruit and vegetable acids but *every commercial acid* excepting hydrofluoric. She is rapidly accepting the fact that "Standard" A-R (the mark of Acid-Resisting Enamel), on the sink and other enamel plumbing fixtures, is a mark of distinction for the better home. And she is well

aware of the *actual* economy which this long-wearing, lastingly-beautiful enamel assures.

Nor are either of these points lost on the man of the house. In plumbing fixtures, more than in any other one thing, a man seeks the substantial—the enduring—the permanently good-looking. They are a built-in part of my home, he reasons. To replace them in five years or so will be a difficult and costly matter. The sensible thing is to start right. And he casts his vote for the *better home*.

Sooner or later, wherever you may be, you will feel the effect of this consistently growing discrimination in the ease or effort with which your property turns. It will be a boost or a barrier, depending on the degree of judgment as reflected in the plumbing specifications.

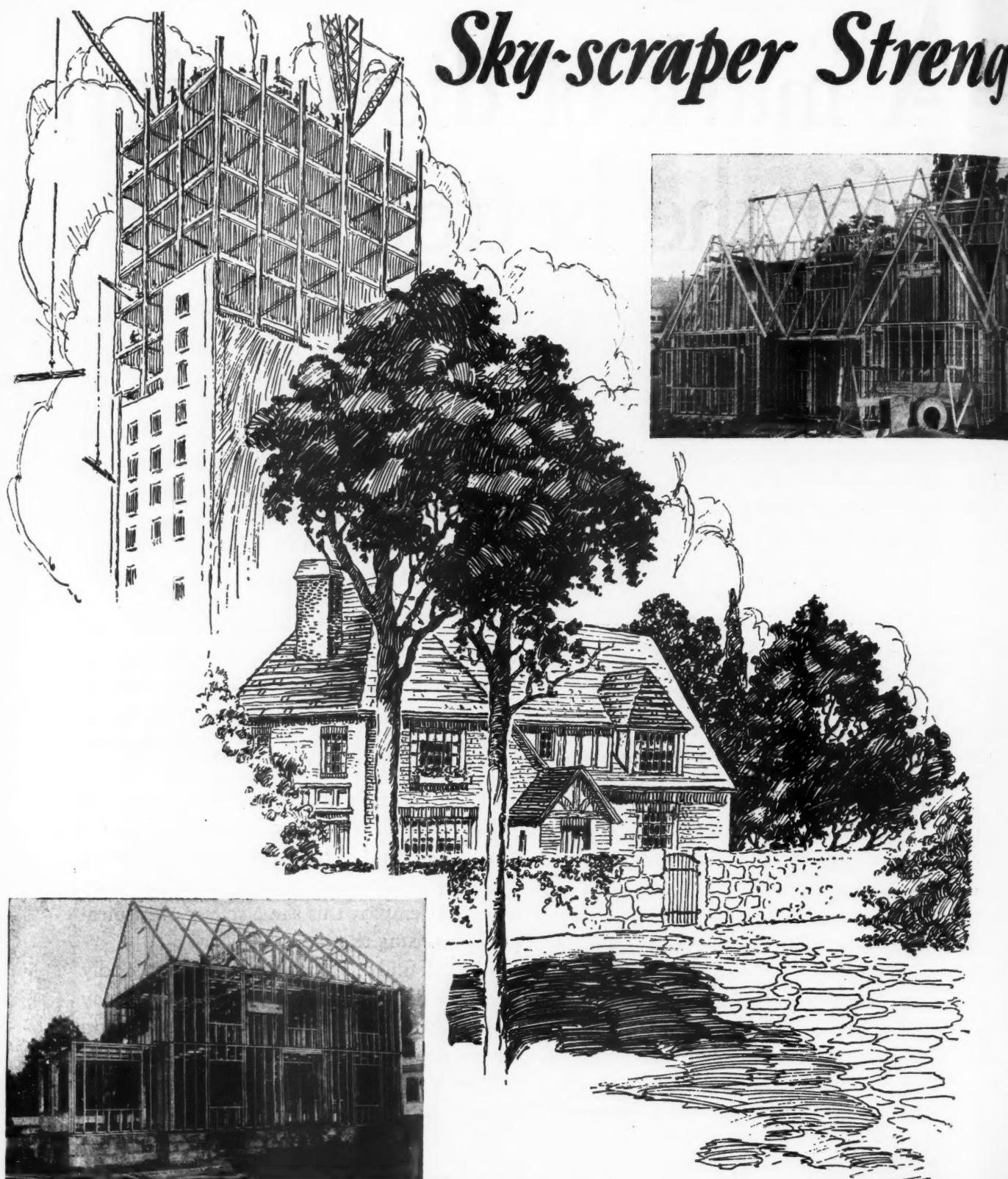
Many of your prospective buyers will point to the "Standard" Showroom as the inspiration of their modern thought on plumbing fixtures. What is more logical, therefore, than for you to employ this same source of inspiration in meeting the demand.

You will find competent men who will gladly counsel with you, and a most complete display of plumbing fixtures in modern design and newest colors, prominent among which is the "Three-8's" Sink, with its "Standard" A-R—the mark of distinction for the better home.

Standard Sanitary Mfg. Co.
PITTSBURGH

"Standard"
PLUMBING FIXTURES

Sky-scraper Strength



STEELRAFT

THE MODERN METHOD OF HOUSE BUILDING

Strength as the framework of the homes you build!

now a practical reality--

No one has ever questioned the use of steel in a skyscraper. It is obviously the *one* logical building material for which there is no substitute.

With the ingenious STEEL FRAME HOUSE SYSTEM you can NOW apply the same sound logic to the erection of the *homes* you build and get all the superior advantages of permanence and fire safety that characterize the time-tried sky scraper.

There is no limit to the architectural possibilities of "Steel Framing". The unique design of the steel frame angles as produced by this company makes it possible to construct a complete frame of steel from foundation to roof at an economic cost within the reach of every home builder.

STEEL FRAME HOUSE COMPANY

Subsidiary of McCLINTIC-MARSHALL CORPORATION

Oliver Building, Pittsburgh, Pa.

Read the interesting description of this ultra-modern development in house construction in the illustrated booklet "Steel Framing For Dwellings"—a copy will be sent upon request.

BUILDING
USE ONSTRUCTION

We're interested in "Steel Framing"

Send your booklet "Steel Framing for Dwellings"

We BUILD approximately..... houses
during year

Company.....

Address.....

Individual.....

Wallace
PORTABLE MACHINES

Portable

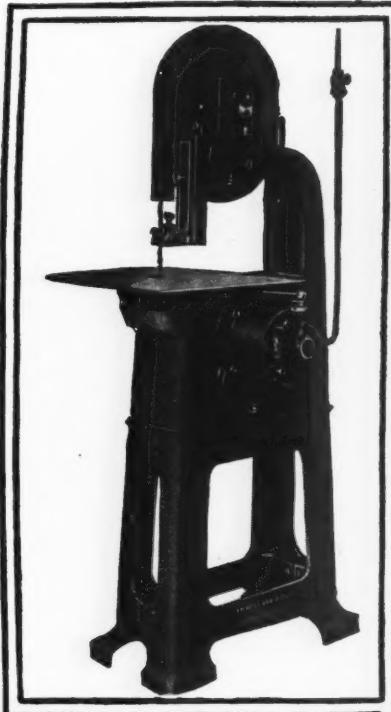
save your money

Workace Radial Saw

Amazing low
price, \$140

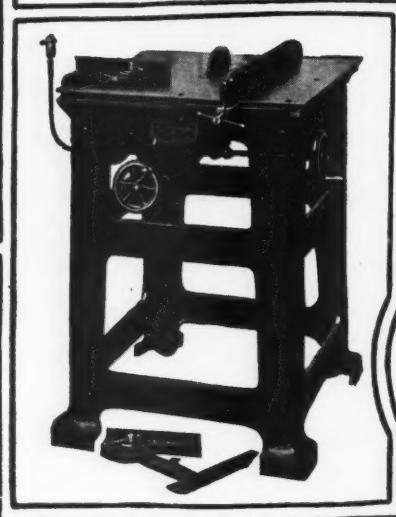
Cast Iron Table, \$10.00 Extra.
Cast Iron Legs, \$15.00 Extra.
(F. O. B. Chicago)

Here's a great big value in
a compact, portable ma-
chine — the Radial Saw,
built to handle all cutting
operations, any angle,
compound meters, cutoff,
ripping, dadoing, tenoning,
routing, shaping, fluting,
boring, sanding, etc.



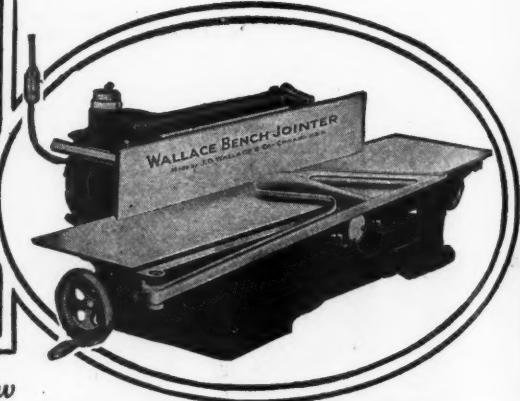
**Wallace Portable
Band Saw**

Contains built-in and directly con-
nected motor with ample power to
efficiently handle work within its
full capacity.



Wallace Portable Universal Saw

A portable floor type of Universal Circular
Saw that combines all the advantages of
the portable bench machine and the self-
contained floor type. The saw can be
moved independent of its base.



Wallace Bench Planer and Jointer

A compact and highly efficient machine — eas-
ily portable with ample power to handle all
classes of work.

Woodworking Machines

and increase your profits

THE percentage of savings and extra profits on both small and large jobs is well worth the small cost of Wallace Individual Portable Machines... You can take a Wallace Machine to the job instead of wasting time and man-power taking the job to the machine.

THE outstanding feature of Wallace Machines is that they are easily moved from one part of a building to another—can be set up anywhere and plugged into any convenient electric light socket. You roll your Wallace Machines from room to room as the work progresses. They're light weight, move about easily, take up very little room and never get in the way.

Many carpenters and contractors move their Wallace Machines into the shop when building construction is slack—or into a garage or basement—and during idle hours work up waste stock, turn out storm sash, screens, standard mouldings, cabinets, etc. There's a handsome profit in this extra work.

Wallace Machines not only bring enor-

mous profit increases but insure uniform workmanship. Motors are integral parts of the machines. You never find a belt-driven Wallace Machine—all are direct drive. You know what this means in convenience and easy running.

Free Trial—Easy Terms

We'll send you one or more Wallace Machines for a free trial so that you can prove their superiority by actually using them, right on the job. You'll find the Wallace way so much cheaper and quicker than old-fashioned methods. If you decide not to keep the machines, ship them back to us and it won't cost you a cent, not even freight charges. Or take ten months to pay, convenient easy terms that frequently come right out of the extra profits so you never miss the money... Our offer is all in your favor... You have everything to gain and nothing to lose... Send coupon today for free book illustrating and describing all Wallace Machines. Write now—no obligation.



The Wallace Electric Hand Saw

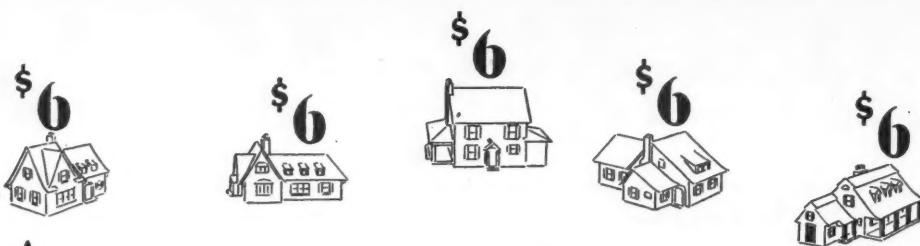
is light in weight and easy to handle. Its chief feature is absolute SAFETY. The blade is entirely covered at all times. The motor, the switch, the operator and the saw itself are completely protected against injury.

J. D. WALLACE & CO.,
136 S. California Ave., Chicago, Ill.

You may send me your book on Wallace Portable Machines and full details of *Free Trial Offer* and easy terms.

Name.....

Address.....



Average a \$6 saving on every house by hanging doors this NEW way



On jobs where close estimates of expense are important—where every dime looks as big as a cart wheel, you can cut ordinary costs by as much as \$6 per house by using the new McKinney "Non-Mortis" Butt.

The illustration shows how it is made and applied. One leaf folds flat into the other so that, closed, they have only the thickness of a single thin leaf!

Therefore, you don't have to cut a single mortise. You can hang a door in less than ten minutes. The door will fit snug, too, with a modest, even joint all around.



The hinges align themselves by means of the swedging on each leaf. Simply lay them in position, locating as for an ordinary hinge, and drive your screws. Easy? You bet. Save half to two-thirds of your time on every door. And that means money. On an average size house it easily totals more than \$6 saved.

Your regular source of supply has them in standard sizes and finishes, or can quickly get them. Cabinet sizes are also available. Use them on your next job and save money. *McKinney Mfg. Co., Pittsburgh, Pa.*

MCKINNEY "NON-MORTIS" BUTT

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

MANY A CONTRACTOR

*Who "Couldn't Be Bothered
with Sanding"*

NOW OWNS A CLARKE



There are many reasons for this change of heart. First and most obvious is the fact that the Clarke makes him additional profit on jobs he used to sublet.

But that is the least of the advantages of Clarke ownership.

More important is the fact that he is sure of turning out a quality of work that builds his reputation as a fine builder.

Another big advantage is that he is never penalized by failure to get his floors finished on time.

The only way you can't profit from a Clarke is not to own one. It costs nothing to get the facts. Send coupon now.

PROOF BY USE

This is one of thousands of letters showing that the Clarke is beyond comparison

LEONARD J. COOPER
Springville, New York

SAYS—"I haven't the least bit of a kick, it sure is great, every job I have done is very satisfactory and everyone who sees it work is astonished. I worked with it against a large machine and I could do more work in less time and when I had covered my space it was a finished job."

**FOR YOUR OWN SAKE
SEND COUPON TODAY**

Clarke Sanding Machine Co.

Dept. A-212, 3815 Cortland St., Chicago, Ill.

*Originators, and for 11 years, Manufacturers of
Portable Sanding Machines*

Interesting Facts About the CLARKE Vacuum PORTABLE SANDER

It will sand 800 to 2,000 sq. ft. of new floor to velvety smoothness in eight hours.

Cuts right through old varnish without the aid of varnish remover or neutralizer, making 300 to 1,000 sq. ft. of the roughest old floor to new velvety smoothness in a day.

Operates off any light socket, no special wiring required.

Easily carried anywhere with one hand.

Dustless in operation with genuine, inbuilt vacuum.

Does bench or shop work on a quality and quantity basis, as easily as it does floor work—and is the only sander backed by a definite positive guarantee of performance. **YOU CAN'T LOSE WITH A CLARKE.**

SANDS MORE SURFACE

CLARKE SANDING MACHINE CO.
Dept. A-212, 3815 Cortland St., Chicago, Ill.

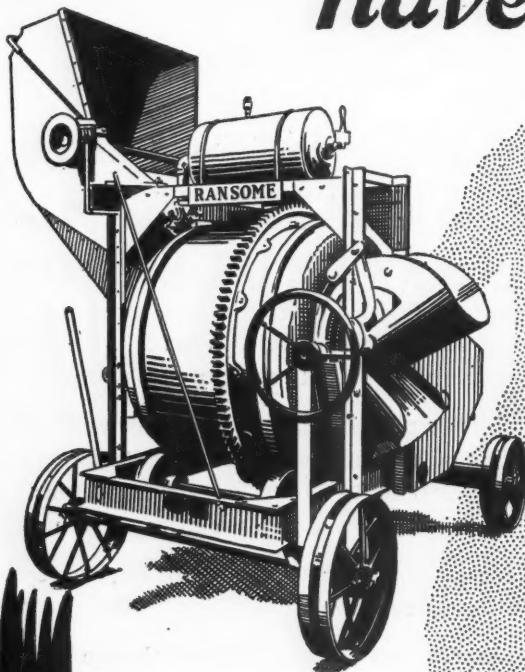
Yes, I want the facts about the Clarke Vacuum Portable Sander. Without obligation, please send them to me.

Name.....

Address.....

City.....State.....

7-S & 10-S Standard Ransome Building MIXERS, have the PUNCH!



Fast, rugged mixers that knock out the work in record time—that is the general reputation of Ransome 7-S and 10-S among mixer "fans".

Look over the measurements of the 7-S—then you'll see why it has the "guts" to stand up and "take" it.

DRUM—51" in diameter by 39" wide.

DRUM ROLLERS—12" x 2 $\frac{1}{4}$ "—car wheel iron, Timken Roller Bearings on Drum Rollers.

FRONT AXLE—built of two 4" Channels, width 1 $\frac{1}{2}$ " cold rolled stubs.

MAIN FRAMES—made of two 6" Channels.

MAIN ROLLERS—12" in diameter.

In This Corner We Have

The Ransome 10-S

DRUM—51" in diameter by 39" wide.

DRUM ROLLERS—12" x 2 $\frac{1}{4}$ "—car wheel iron, Timken Roller Bearings on Drum Rollers.

CONTROL—One set of levers located at drum end of mixer.

GASOLINE ENGINE—LeRoi or Novo—4 cylinder.

WATER MEASURING TANK—16" x 40"—capacity, 37 gallons.

Ransome—the first mixer in the ring
—the last to enter the repair shop.

Mail this Coupon!



Ransome Concrete Machinery Company

1850—Service for 78 Years—1928

Dunellen

New Jersey

Ransome Concrete Machinery Company,
Dunellen, N. J.—Dept. A. B.

Without obligation, send me full information about the Ransome
 7-S Mixer, 10-S Mixer.

Name.....

Address.....

"Clean the Outside from the Inside"

CAR-KRA



WINDOWWARE

AT LAST - A MODERN WINDOW

For the first time since double-hung windows were invented—Car-Kra Windowware provides a marked improvement in window construction.



As Easy to Clean As a Table Top

Car-Kra Windowware may be installed on any standard, double-hung wood sash. No special frames are necessary. It is easily applied to either old or new construction.

No More of
This Drudgery

Builders and Architects now using Car-Kra Equipment tell us that it is the most valuable feature that can be put into a house, apartment or office building to promote ready sale or quick rental.



Perfect Ventilation Without Draft

MAIL THIS

Please send me illustrated folder and full information regarding Car-Kra Windowware.

A.B.

I am interested as a

Distributor
 Building Contractor



The Modern GARAGE DOOR Must

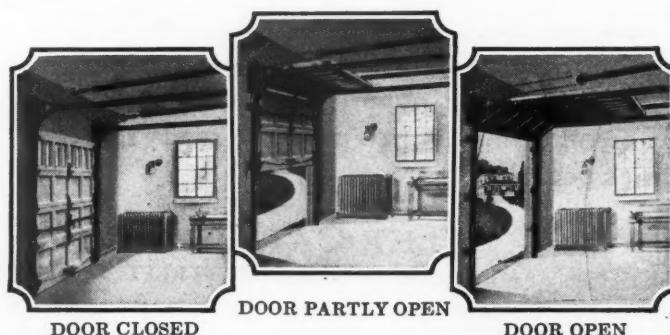
1. Stay open.
2. Not blow shut.
3. Not use valuable space.
4. Be easily and quickly operated.
5. Lock and unlock from either side.
6. Not twist, sag or pull out of shape.
7. Require no unusual or radical change in building to install.
8. Stay closed.
9. Open out of the way.
10. Not scrape on the floor.
11. Not wedge or jam in snow or ice.
12. Seal opening at top, bottom and sides.
13. Harmonize with any style of architecture.
14. Make available every inch of the opening.

The "Overhead Door" incorporates all of these features

THE "OVERHEAD DOOR" is reliability personified. In any kind of weather—snow, wind, ice, rain—this modern garage door ALWAYS WORKS perfectly. It opens UP—COMPLETELY OUT OF THE WAY. The "OVERHEAD DOOR" runs easily and smoothly in vertical tracks and comes to rest in horizontal tracks above, thus permitting use of entire width and height of door opening. Counter-balancing springs, and BALL-BEARING ROLLERS make operation easy. A child can operate the "OVERHEAD DOOR" with ease.

The cost is no more than any other door.

The modern home is not complete without a garage and no garage can be modern without an "Overhead Door."



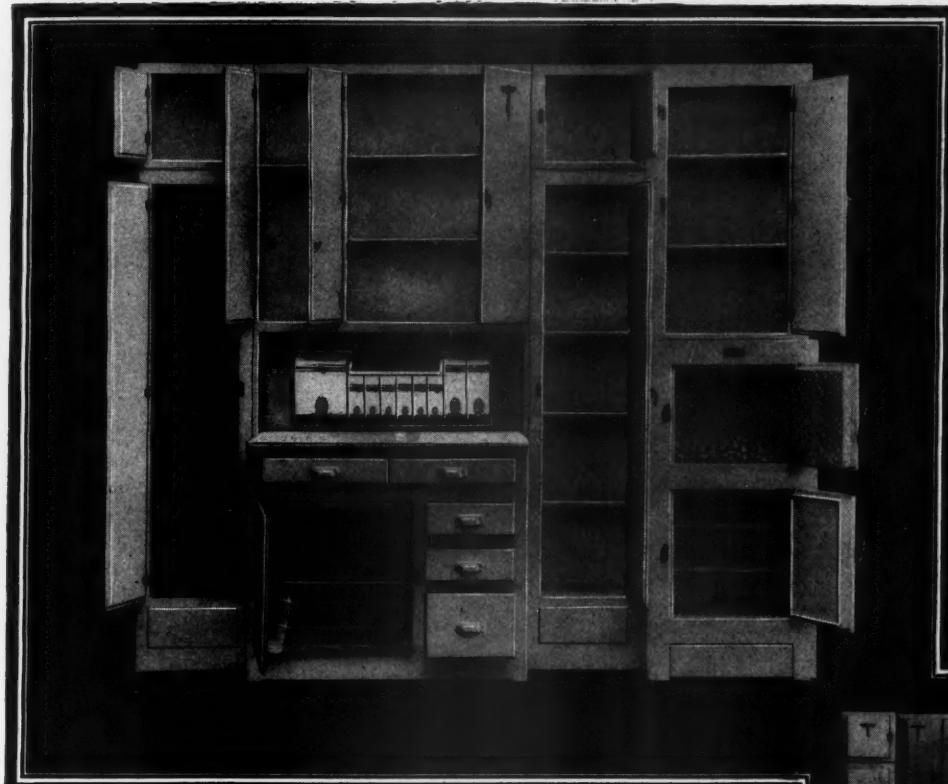
OVERHEAD DOOR CORPORATION

HARTFORD CITY, : INDIANA, U. S. A.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

KITCHEN MAID

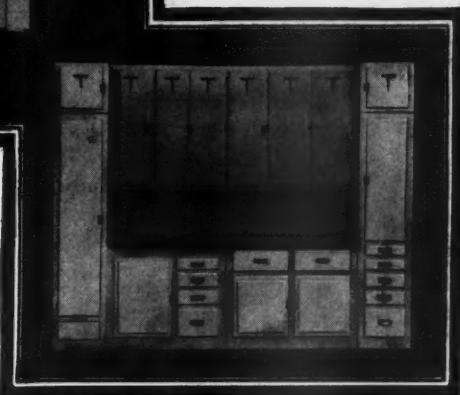
STANDARD KITCHEN UNITS



Available in:
 CACTUS GREEN
 LAMA TAN
 DOVE GREY
 TRAVERTINE IVORY
 SHASTA WHITE

Left: 740 X Combination—
 consisting of seven distinct units.

Below: The Butlery, for service
 halls and large kitchens.



Kitchen Prestige . . . *that helps you rent or sell*

To millions of women, the name Kitchen Maid is a symbol of all that is new, fine and smart in kitchens. Show any woman a kitchen equipped with Kitchen Maid Units—and you've gone far toward selling her on the entire house or apartment.

These units are the product of America's largest exclusive makers of built-in kitchen equipment. They include kitchen cabinets, broom closets, dish cupboards, divider cupboards, refrigerators, butlery units, Dinofold breakfast nooks, complete kitchenette assemblages—units filling every kitchen need.

Each Kitchen Maid unit is complete in itself—may be used alone or in a unit combination, installed in recess or set against the wall. Kitchen Maid standard finishes offer a choice of *Cactus Green*, *Lama Tan*, *Dove Grey*, *Travertine Ivory* or *Shasta White*.

Kitchen Maid Units, moreover, provide many important practical advantages found in no other equipment—such as sanitary rounded inside corners, smooth doors, concealed hinges.

Let us send you the Kitchen Maid catalogue, dimensional drawings and prices. Write.

WASMUTH-ENDICOTT COMPANY
 1312 Snowden Street, Andrews, Indiana

THE DINOFOLD

Charming folding
 "breakfast
 nook." Seats four
 people. Folds up
 as a unit—on
 wall, door, or in
 wall recess.



Lacquered in Olive Green
 or Mandarin Red with
 gold striping and antique
 shading or in Early
 American Maple, antique
 shading with green trim-
 ming. Also available un-
 finished.



If in Canada, address
 Branch office
 Waterloo, Ontario



Masonite
INSULATED

A Masonite protected home at 415 E. 70th St., Kansas City, Mo. Masonite Insulating Lath is used in the two ceilings and in all outside walls.

A BIG Talking Point at LITTLE Extra Cost

YOU have a big talking point when the buildings you put up are Masonite-insulated.

Yet Masonite, because of the material it displaces and the labor it saves, has little effect on the actual cost of construction.

Its construction economy is two-fold.

It replaces conventional sheathing and the building paper used with it.

And its uniform, easily handled boards cut labor costs to the bone.

Satisfied home owners are quick to recommend builders who use this permanent insulation. Send TODAY for a sample and the full story of building for profit with Masonite.

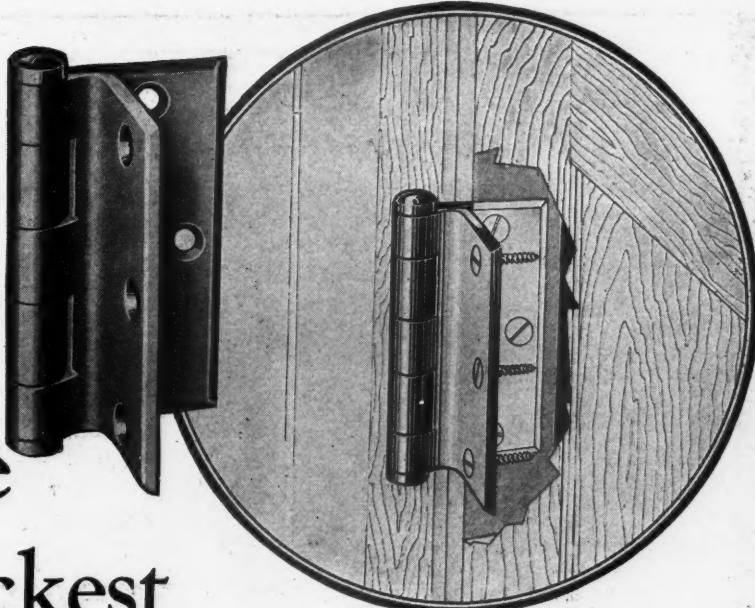
MASONITE CORPORATION
Dept. 1128, 111 W. Washington St., Chicago, Ill.
Mills: Laurel, Mississippi

Masonite
STRUCTURAL INSULATION
Made by the makers of MASONITE PRESWOOD
REG. U. S. PAT. OFF.

© M. C.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Stanley Half-Surface Butt No. 161 Plated Finish . . . No. 116 for painting.



The quickest way to hang a door!

*No mortising . . . no gauging . . . applied
on the surface of the door and jamb*

Here is a new design in half-surface butts which greatly shortens the time required to hang a door.

This new Stanley butt eliminates the cutting of mortises. The bevel-edged jamb leaf fits into the conventional opening between door and jamb, and the door leaf is applied on the face of the door.

No gauge is required. Simply fasten the butts to the jamb. Then, turning the surface leaves back out of the way, the door is fitted into the opening. The surface leaves are then turned back against the door, screws

driven in, and the door is hung.

The narrow surface leaf with beveled edges presents a neat appearance on the door.

Butts are furnished in any plated finish under class No. 161, or, with a priming coat for painting under class No. 116. Where it is desired to make the hardware inconspicuous, the latter finish is recommended. Button tips add to the attractive appearance of the butt.

Where economy in installation is desired, use the new Stanley Half-Surface Butt No. 161 or No. 116.

THE STANLEY WORKS • NEW BRITAIN, CONN.

STANLEY HARDWARE MADE OF STANLEY STEEL



The Stanley Works, New Britain, Conn.
Send me, free of charge, a copy of your Hardware Catalog No. 41m.

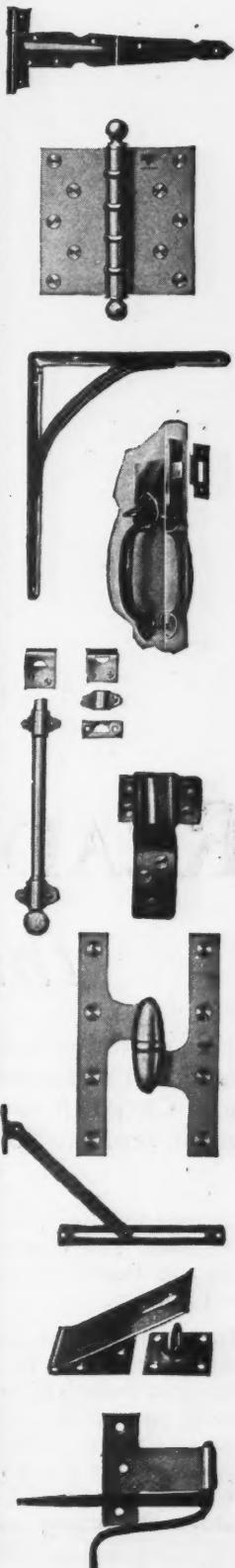
Name _____

Address _____

City & State _____

My hardware dealer is _____

There are thousands of items in the extensive line of Stanley Hardware. You can find just the style and size you need in the Stanley Hardware Catalog No. 41m shown below.



THE SATURDAY EVENING POST

M

OST AMAZINGLY SIMPLE WAY
of having *Oak Floors* - -



CROMAR Oak Flooring is completely finished *at the factory*: scraped, sanded, filled, twice varnished — and treated to resist moisture. **NAIL IT DOWN and USE IT!**

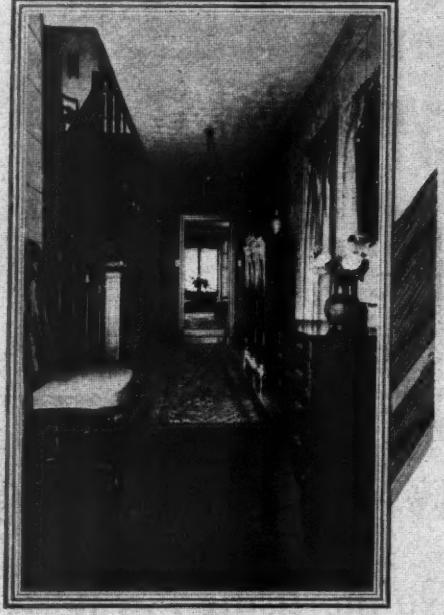
INGENIOUS machines, patented, perform at the CROMAR factory all those time-consuming, messy, and irritating operations which make it so discouraging to finish flooring in the home by hand, after it is nailed down. With the beautifully finished CROMAR strips are nailed down, the floor is ready for use. And — the nailing is done at the speed of a room a day!

CROMAR machines, furthermore, do far more thorough and more uniformly beautiful work than the best trained human hand can do. Yet a CROMAR Floor costs no more than a hand-finished oak floor!

Write for brochures which tell of CROMAR's numerous technical advantages in an interesting, non-technical way.

CROMAR is sold by lumber dealers, but carpenters and contractors install it. Consult any of these for further information. If you have the slightest trouble in getting satisfaction, write us and we shall give your inquiry immediate personal attention.

THE CROMAR COMPANY, WILLIAMSPORT, PA.
Pacific Coast West Division:
THE C. L. THOMPSON CO., 599 Market St., San Francisco, California





THE OLD WAY



THE CROMAR WAY

Send for a free sample of CROMAR and try the famous CROMAR Hammer. You will find it will do all of your work and knock the varnish, but the CROMAR varnish is so good that you can do as much before varnish.

READ

this Advertisement —

It's a reproduction of the current CROMAR Full Page in The Saturday Evening Post. It tells you how CROMAR saves you time—and money—on six separate flooring processes.

CROMAR Flooring is scraped and sanded, filled and twice varnished, and treated to resist moisture, right in the CROMAR factory. There is not a thing for you to do but nail it down.

That means independence—freedom from the delays and annoyance caused by dependence upon floor finishers. Freedom from inferior quality which you sometimes risk when you sub-let your work. The special CROMAR V-type tongue-and-groove makes it a speed job, too. It fits without "blocking," and does away with "setting" nails.

CROMAR is made from Appalachian White Oak only. This slow-growing, medium-textured oak gives you better grain and figure than the very hard-textured stock. It also takes and better holds a finish.

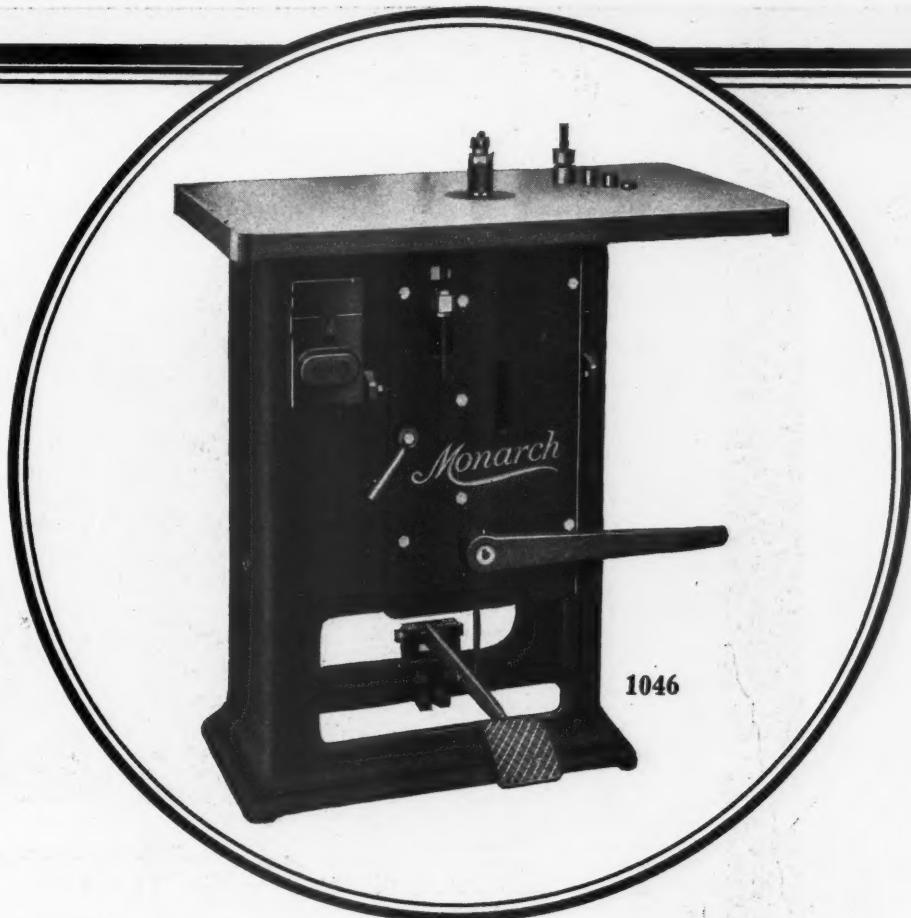
You can handle a whole lot more flooring jobs with the same number of men—and do away with the trouble, and the uncertainty of floor-finishers entirely.

"Carpenters and Contractors install CROMAR." You will notice that phrase in the last paragraph of every CROMAR advertisement in the Post. It is making business *for you* with more than three million families that read The Saturday Evening Post. Take advantage of it in relaying work.

As for new house construction—well, consider the case of Mr. W. Percival Johnson of Philadelphia. He has a reputation for being one of the city's best and most successful developers. Year after year he has used CROMAR in hundreds of high-grade houses, upstairs and down.

He says CROMAR helps him sell his houses. The quality is the reason.

THE CROMAR COMPANY
WILLIAMSPORT, PA.



Monarch SINGLE SPINDLE SHAPER

New Style, Higher Speed, Greater Efficiency Unusual Value

This new Shaper will perform swiftly . . . smoothly . . . surely . . . any job you give it. Cuts, *without reversing*, against, across, as well as with the grain. The high speed (7,200 r. p. m.) spindle runs in best obtainable ball bearings; spindle may be easily raised or lowered by means of a *foot lever* or *hand lever* to allow

the use of a routing bit; the strong, heavily ribbed table is light enough to be easily detached; motor and belt are completely assembled within the one-piece cast frame; belting direct from motor to spindle obtains high speed without excessive cost or cycle changes. Write for complete specifications and low price.

Exclusive economy and efficiency factors are embodied in these other Monarch machines: woodworkers, mor-

tisers, jointers, bench band and variety saws, swing saws, tilting tables, sanders. Descriptive circulars on request.

AMERICAN SAW MILL MACHINERY CO.
60 Main Street, Hackettstown, N. J.

Manufacturers of a Complete Line of Woodworking and Saw Mill Machinery



AGAINST lacquered walls in red and gold, against the black of the bath niche tiling gleam fixtures in citrus yellow; in this Mandarin bath the decorative art of the east happily meets the plumbing convenience of the west. Into their setting, as though designed for just this room, fit the *Corwith* lavatory, the *Tarnia* bath, the *Corsyn* closet. The simplest cottage bathroom too is lifted out of

the ordinary by Crane fixtures; wherever installed they are always interesting. And they cost no more than substitutes. *New Ideas for Bathrooms* is an illustrated book containing blue prints and full decorating and arrangement information for a series of delightful rooms, with beautiful, reasonably priced Crane materials. This helpful volume will interest you. It will be sent you on request.

150
Pounds Pressure



CRANE



2500
Pounds Pressure

FIXTURES, VALVES, FITTINGS, AND PIPING, FOR DOMESTIC AND INDUSTRIAL USE

Crane Co., General Offices, 836 S. Michigan Ave., Chicago + New York Offices, 23 W. 44th St. + Branches and sales offices in one hundred and seventy cities

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Make a name for yourself as a store front specialist

HERE is one of the most lucrative fields of building contracting.

Window display is the most important part of a retail merchant's establishment. His profits and volume of business depend entirely upon his facilities for merchandise display.

Take advantage of this situation. Every merchant in your community is open to your solicitation.

Our national advertising of Kawneer Store Fronts is paving the way for your success as a store front specialist.

Other contractors have found it highly profitable—why not you? Just write us today. We'll gladly cooperate with you and help you land any prospect whose name you suggest.

THE **Kawneer** COMPANY

3326 Front St., NILES, MICHIGAN



Send Your Book "MODERN STORE FRONTS FOR BETTER DISPLAY" To—

Name.....
Address.....
City..... State.....



IT
NEVER RAINS
THIS HARD

~no
loss



Specify

BATES *Multi-Wall* **PAPER BAGS**

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

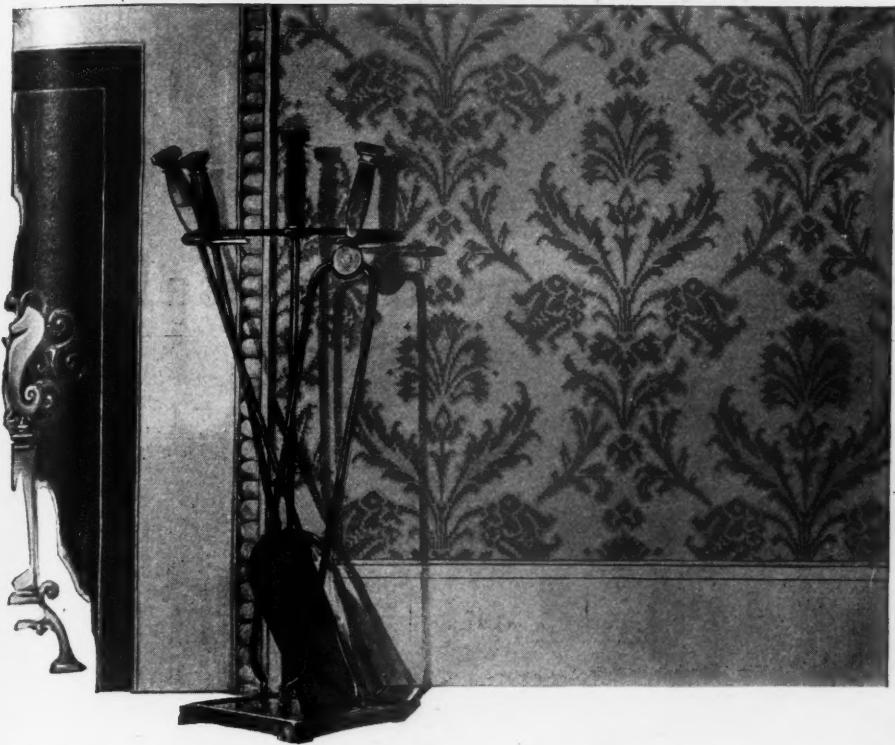
THERE is little likelihood that the clouds will ever let loose such a torrent upon a cement sack as flows from the hose in this picture. But whether there be sudden storms or other destructive air-moisture, cement packed in Bates Multi-Wall Paper Bags is always dry.

Protected by the 5 separate paper walls of Bates Bags, cement and plaster can safely be delivered any time and stored anywhere. Bates Bags

thus help to keep the job up to schedule and ensure the use of full-strength materials.

These modern, strong and moisture-resisting containers are made by the Bates Valve Bag Corporation, the original and largest manufacturers of multi-wall bags. This company owns and operates 9 modern bag plants in the United States and Canada.

BATES VALVE BAG CORPORATION
General Offices: 35 E. Wacker Drive, Chicago



Sanitas On The Walls Helps To Sell Houses

Bare walls cost you money—they look so cold and uninviting that many a prospective purchaser just takes up your time and says "No!"

Experienced developers and builders have learned that it pays to decorate the interior walls and ceilings with Sanitas, the cleanable cloth wall covering. Sanitas appeals to the prospect, not only because it adds charm to any room, but most people know that Sanitas makes walls an investment instead of an expense. Sanitas can be applied to walls as soon as the plaster is dry. Shrinkage cracks which develop in walls or ceilings cannot show through Sanitas. Dirt and dust can be wiped off with a damp cloth.

There are Sanitas styles for every room in the house. Write on your letterhead for free sample book, containing 150 styles of Sanitas.

THE STANDARD TEXTILE
PRODUCTS Co.
320 Broadway Dept. 51 New York



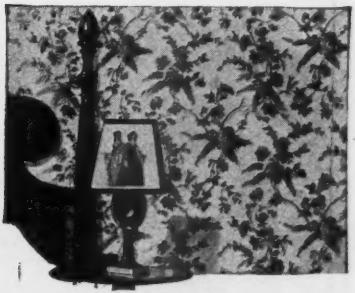
Look for this
trademark on the
back of the goods

Send for this Sample Book

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



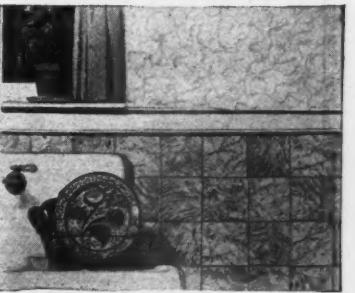
DINING ROOM



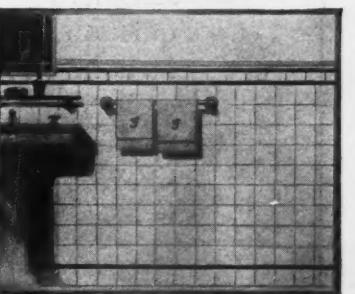
BEDROOM



HALL

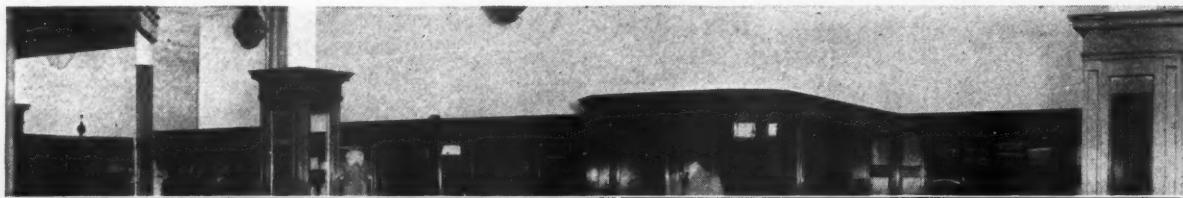


KITCHEN

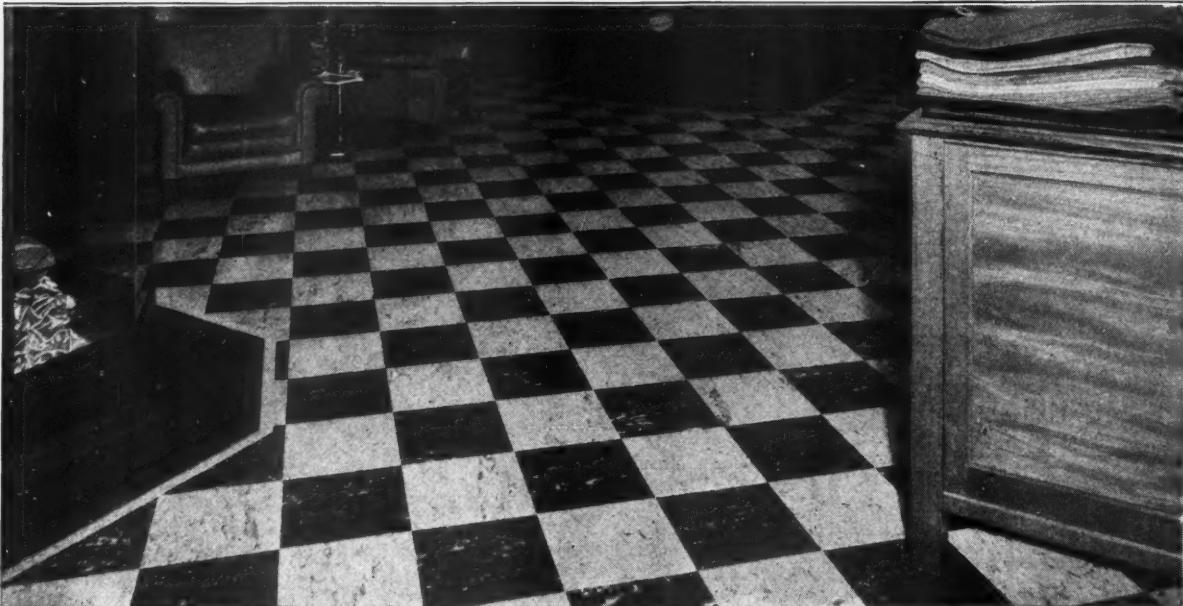


BATHROOM





A fine floor gives impetus to sales



Effective use of Goodyear Rubber Tiling in Goddard's store at Lynn, Massachusetts. Installation by Bloom, South & Gurney, Inc., of Boston

Good merchandising begins at the floor. A floor of Goodyear Rubber Tiling will contribute to the inviting effect of any retail store.

This modern material comes in a wide range of colors and patterns to harmonize with any interior scheme. It is agreeable to the eye, quiet and resilient under foot.

It is impervious to moisture and easily kept clean. It offers great resistance to the hardest kind of wear. Quality considered, the cost is low.

Because of these good qualities, Goodyear Rubber Tiling is also in wide demand for churches, clubs, hospitals and hotels. It is equally appropriate and desirable for the better class of homes, with a special adaptability to bathroom and kitchen.

Choose from fourteen solid colors, and many attractive two- and three-color combinations. Complete architectural data gladly forwarded upon request. Address Goodyear, Akron, Ohio, or Los Angeles, Calif.

The Greatest Name in Rubber

GOODRIDGE  **YEAR**
RUBBER TILING
Copyright 1928, by The Goodyear Tire & Rubber Co., Inc.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

"Now We Know That Our Walls and Ceilings Will Be Fire-Safe"



ARCH LATH is Practically a Solid Sheet of Steel!

Arch Lath is the extra margin of safety in wall and ceiling construction—and the cost of this adequate protection is no more than where flimsy, inflammable material is used.

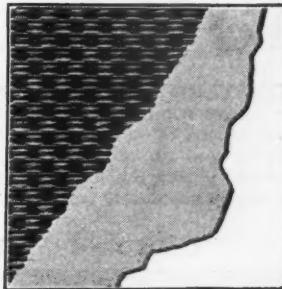
Arch Lath appeals to architect and owner because it provides adequate protection against fire. Arch Lath is practically a solid sheet of steel. It is a fire-safe barrier of the most certain kind. It makes walls and ceilings more substantial, more secure. It does not cost any more than inflammable material which offers little resistance to cracking.

The favorable cost of Arch Lath is the result of a distinctive arch design which prevents plaster waste. Only the correct amount of plaster to effect perfect anchorage is permitted to squeeze through the open-

ings. There is no piling up of plaster between walls.

Because it is rigid, in fact *extra rigid*, Arch Lath makes a model plaster base. It takes the force of the trowel without sagging and assists both rapid and efficient workmanship. The rigidity of Arch Lath is also a factor in speeding up application and keeping down the cost.

Space will not permit a complete review of the many features of Arch Lath. We invite you to send for sample of Arch Lath and detailed information. Write to us today.



WHEELING CORRUGATING COMPANY, Wheeling, West Virginia
Branches: New York, Philadelphia, Chicago, Minneapolis, St. Louis, Kansas City, Chattanooga, Richmond, Des Moines, Columbus, Ohio

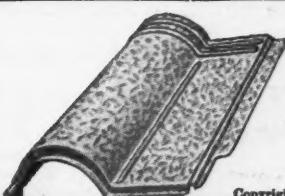


For Weather-proof Roofs of Distinction— Wheeling Spanish Tile

Wheeling Spanish Tile Roofs have all the character and charm of old Spain. The most artistic roof covering manufactured.

Wheeling Spanish Tile is low in cost, durable, leak-proof and lightning-proof.

Write for full information



Copyright 1928

You Get This Big New Book



*Absolutely
Free!*

**"Most
Popular Homes
In America
—VOLUME TWO"**

is a companion book to *Volume One*, which has had a phenomenal sale in the past year. *Volume One* has been repeatedly called the most beautiful and useful home design book ever printed.

The new book, "*Volume Two*", is even more beautiful in appearance and contains 20 more full color plates than *Volume One*. If you already have *Volume One*, you will certainly be delighted with *Volume Two*.

We have on hand only a limited number of this new book—they are going rapidly. If you want yours, send for it now, *today*, before the supply is exhausted.

15 Sets of Complete Building Plans

FIFTEEN of the home designs in this wonderful book have complete working drawings, scale one-eighth inch and larger. You can build direct from these drawings, thus giving you an architectural service worth a neat sum of money, yet we include them in this wonderful book and send it to you absolutely free of cost.

These working drawings are only one of the many valuable features of this remarkable book. In addition, there are Twenty Pages of designs printed in four colors. Many pages of high-class half-tones reproduce actual photographs of beautiful interiors, furnishings, modern home conveniences, etc., etc.

Clip and Mail This Coupon—NOW!

THE AMERICAN BUILDER 1827 Prairie Avenue, Chicago, Ill.,	A.B. 12-28 1928
ENTER Enclosed find \$2.00 for which RENEW my subscription to The American Builder for one year and send me free and postpaid a copy of your book "MOST POPU- LAR HOMES IN AMERICA"—Vol. 2.	
NAME.....	
ADDRESS.....	
POST OFFICE.....	STATE.....
My occupation is (Check Only One) <input type="checkbox"/> Dealer <input type="checkbox"/> Builder <input type="checkbox"/> Architect <input type="checkbox"/> Real Estate <input type="checkbox"/> Miscellaneous	

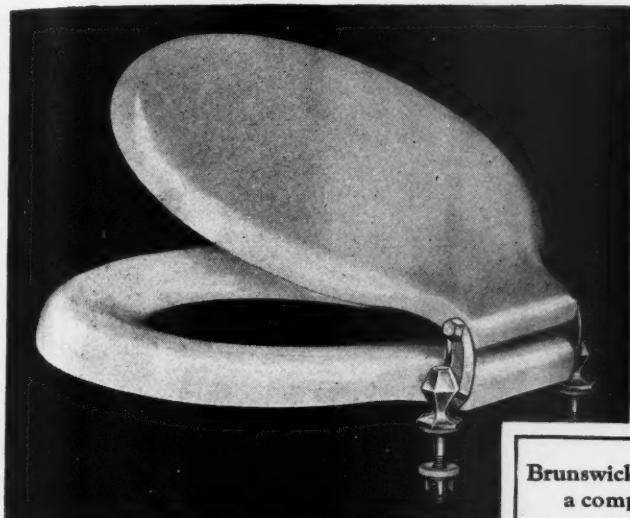
How to Get Your Free Book

This useful and handsome book will be sent you Free and Postpaid with a new or renewal subscription to "American Builder" at the regular subscription rate, \$2.00 for one year. \$2.00 pays for the subscription—the book is a gift.

The subscription may be new or renewal, or it can be an extension of present subscription, but in all cases *must be sent direct to "American Builder"* and be accompanied by check, money order or currency for \$2.00. Subscriptions sent in any other way will not entitle sender to free book.

OFFER GOOD IN U. S. AND CANADA
Add \$2.00 to Foreign Countries

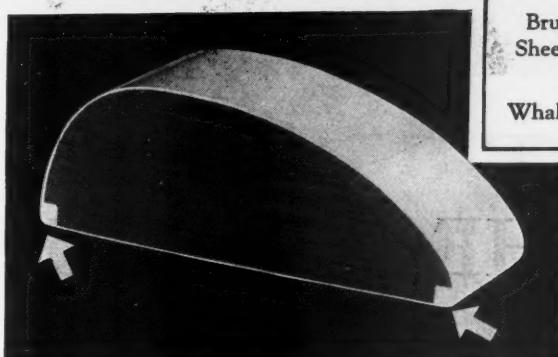
Exclusive Features found only in the Brunswick Closet Seats



Brunswick now offers
a complete line
Brunswick Wood Seats

Brunswick White
Sheet-covered Seats

Brunswick
Whale-bone-ite Seats



Reinforced Cushion Edge on
Brunswick White Seat
Makes what has been the weakest part
of a sheet-covered seat the strongest!



Hinge on the Whale-bone-ite Seat
Makes the hinge of this finest of closet seats as
permanent and indestructible as the seat itself.

THE experience which has made Brunswick's Whale-bone-ite Seat the standard of quality, in closet seats, is now applied to other types of seats. The result: construction features that will give you longer

service, greater value for your money. It pays now to consult Brunswick's catalog no matter what type of closet seat you are looking for. Don't accept a substitute for Brunswick Closet Seats.

WHALE-BONE-ITE TOILET SEAT

THE BRUNSWICK-BALKE-COLLENDER COMPANY · CHICAGO

Albany
Atlanta
Birmingham

Boston
Buffalo
Charlotte

Chicago
Cincinnati
Cleveland

Dallas
Denver
Des Moines

Detroit
Harrisburg
Houston

Kansas City
Los Angeles
El Paso

Minneapolis
New Orleans
New York

Philadelphia
Pittsburgh
Richmond

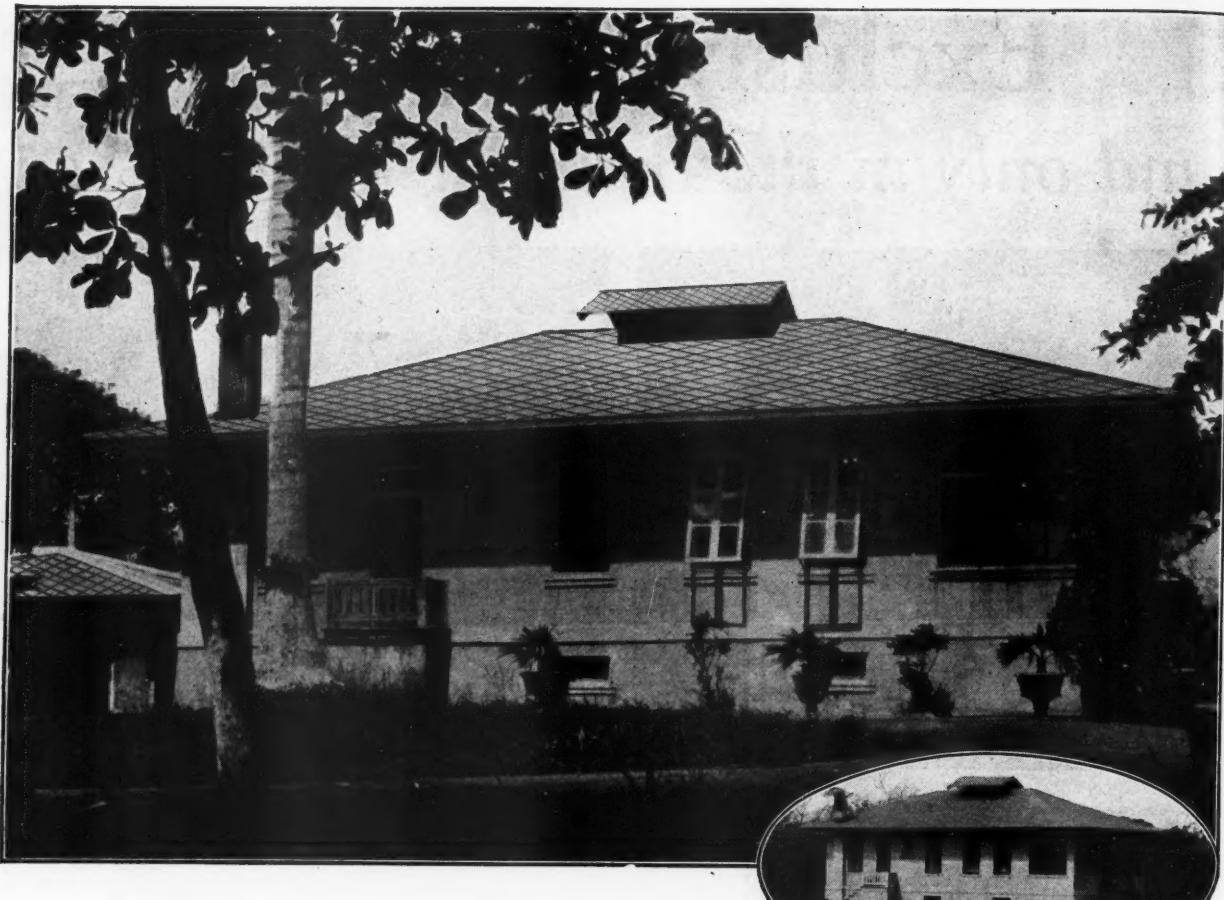
San Francisco
Seattle
St. Louis

Tampa
Washington
Montreal

Ottawa
Toronto
Havana

If you do not have our catalog, write today for a copy. Address Dept. 325,
Seat Department, 623 South Wabash Avenue, Chicago

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



THE ROOF THAT DEFIED THE TROPICS

Twenty-three years ago a home was built for the caretaker of the Brazos Brook Reservoir in Panama, C. Z. Only materials which would withstand tropical storms and heat could be used, so naturally *Ambler Asbestos Shingles* were used on the roof.

Nearly a quarter of a century of blazing sun, long rainy seasons and heavy winds, yet today this roof shows no appreciable wear. Hardly a dollar has been spent in repair.

That's wear! That's service! Figures of tropical rainfall show that this roof with its total area has

withstood 4554 tons of rainfall in these 23 years. Yet today it still is serving Uncle Sam, and will for another half century.

This record would not be unusual in northern climes, either, for Ambler Asbestos Shingles, being made of Asbestos and Hydraulic Cement, are indestructible by the elements; tough and elastic, easily applied, *fireproof*, and good to look at. The combination of these qualities makes for the ideal roof. From the fire hazard standpoint alone, you should consider no other form of covering.

Write our nearest branch for samples and prices of uniform thick and TAPERED Ambler Asbestos Shingles. Ask for the "Green Book" showing the latest type—"English Thatch" in colors.

ASBESTOS SHINGLE, SLATE & SHEATHING CO.

Pioneers in Asbestos Products.

Factories: Ambler, Pa.
St. Louis, Mo.

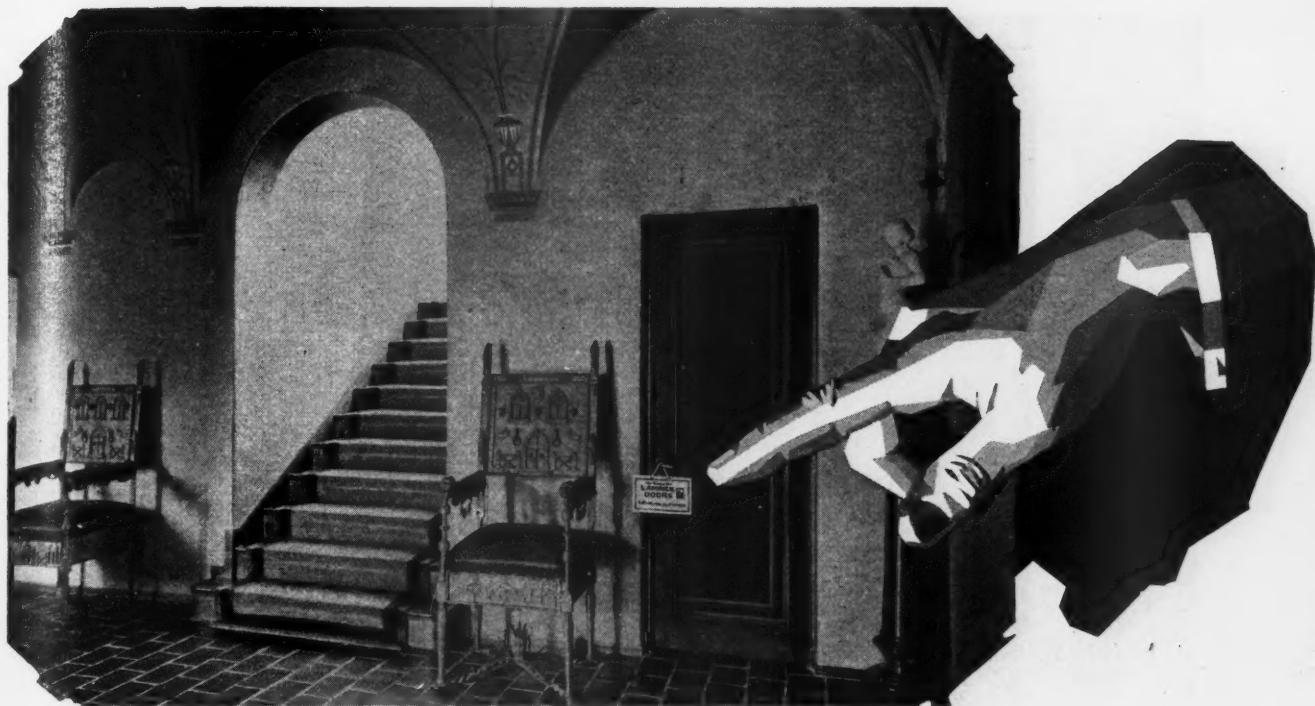
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cleveland, Ohio.

Detroit, Mich.
Milwaukee, Wis.
Minneapolis, Minn.
New York, N. Y.

Omaha, Neb.
Philadelphia, Pa.
Pittsburgh, Pa.

St. Louis, Mo.
Washington, D. C.
Wilkes-Barre, Pa.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



You'll point with pride to Laminex doors

YOU'LL never have to apologize for the appearance or the operation of Laminex doors. Once installed, they'll never give trouble of any kind. Unlike many ordinary doors, they never have to be taken down, refitted, refinished and rehung. You'll point with pride to Laminex doors as evidence of your good judgment.

Scientific construction—welded with waterproof cement

The stiles and cross-rails of Laminex doors are built on cores of stress-neutralizing blocks, and any attempt of one block to warp, swell or shrink is immediately counterbalanced, or neutralized by forces in the opposite direction, exerted by neighboring blocks. All parts of a Laminex door are held together firmly by secretly compounded Laminex cement, which is absolutely waterproof and actually stronger than wood. Bottom rails are quadruple doweled—the dowels being extra large and long. Panels are three-ply with the grain of adjoining plies crossed.

Laminex, the door that stands the famous soaking test

You could, and retail dealers frequently do, soak a Laminex door in water to prove that dampness can never make it warp, split or come apart. Progressive millwork and lumber dealers can supply you with Laminex doors in popular designs, all bearing the yellow replacement guarantee label and the word "LAMINEX" on the bottom. If you have trouble obtaining them, write us. Mail the coupon today for valuable information about doors and approved methods of finishing.



This is the famous Laminex door soaking test that retail dealers make publicly in all parts of the country. It proves conclusively that dampness will never make a Laminex door warp, split or come apart. Ask your dealer.

Laminex doors are now being manufactured of Philippine Hardwood as well as of Douglas Fir

LAMINEX DOORS

Will not shrink, swell or warp

REG.
U. S.
PAT.
OFF.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

THE WHEELER, OSGOOD COMPANY, Tacoma, Washington
Gentlemen: Please send illustrated literature showing designs and finishes.

L1228

NAME _____

ADDRESS _____

CITY _____ STATE _____

I buy _____ doors per year.



Hidden values in house building

WISE HOME BUYERS know that the real *worth* of a house is not measured entirely by its looks. Appearances are important, of course. Design—proportion—decoration—all these are among the objectives of the builder.

But houses are to be *lived in*—and living calls for *comfort*—and this unseen value is being demanded more and more by the house buyers of today.

You have wonderful hidden values to talk about when you are able to assure the prospect that the house is insulated with the *comfort-giving* material known as Insulite.

Insulite sheathing and plaster base—Insulite for lining the attic and garage—for deadening sounds—as a means of preventing damp conditions—as wall board when plaster is not called for—represent plus values of the sort that make quick sales.

Write for samples and descriptive booklets.

INSULITE

the Wood-Fiber Insulating Board

THE INSULITE CO., 1202 Builders Exchange
Dept. 4. Minneapolis, Minn.

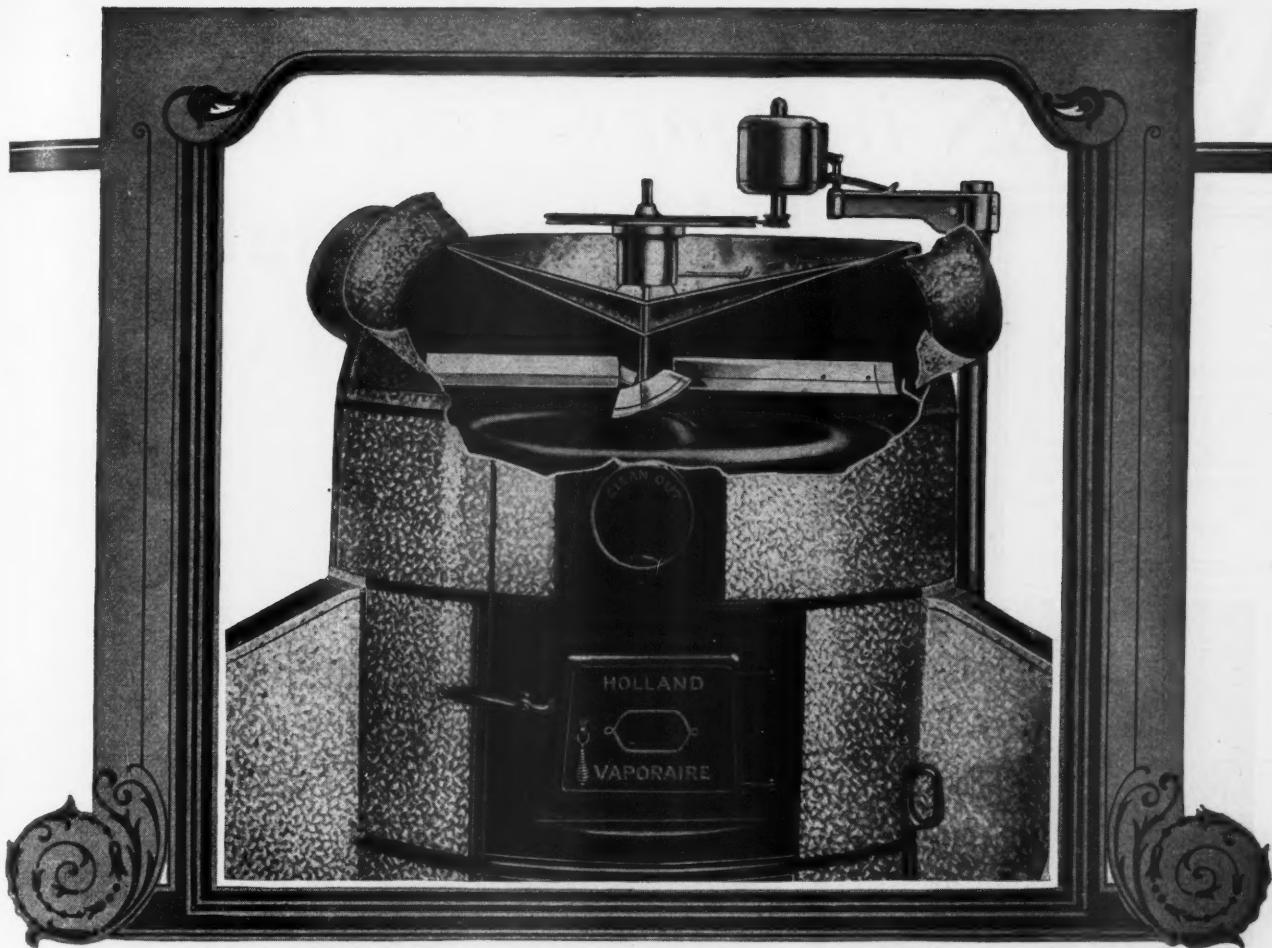
Please send Insulite samples and descriptive booklets to

Name.....

Address.....

City..... State.....

THE INSULITE COMPANY
1202 Builders Exchange Minneapolis, Minnesota



This modern forced air heating system will help you sell more homes . . .

Holland's Air-U-Well Vaporaire System offers builders a new short cut to sales. The advantages of Holland Vaporaire Heating are combined with a system of electric control and forced circulation that gives instant heating response and perfect distribution of warmth to every room. It is one of the most powerful selling factors that can be built into a modern home. Prospects everywhere have heard of

this remarkable plant. They are anxious to see it. They want it in the homes they buy. Installed in the homes you build, the Holland Air-U-Well is a publicity feature—an advertising element—a compelling sales factor! Satisfaction is guaranteed. Investigate this remarkable system. Prove for yourself that the Holland Air-U-Well will increase your sales momentum—reducing expense and increasing profit.

HOLLAND
Vaporaire
HEATING
HOLLAND FURNACES MAKE WARM FRIENDS

FOR ADDRESS OF NEAREST BRANCH LOOK IN YOUR

TELEPHONE BOOK

World's largest installers of home-heating systems

525 direct factory branches and service stations

HOLLAND FURNACE COMPANY
HOLLAND, MICHIGAN

Without obligation on my part, please

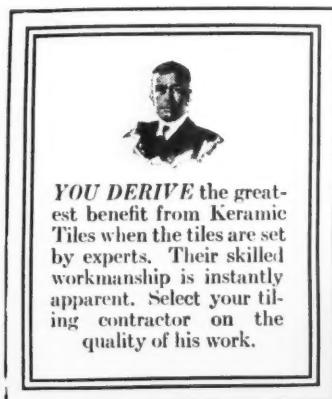
Send me literature Have a Holland man call

Name _____

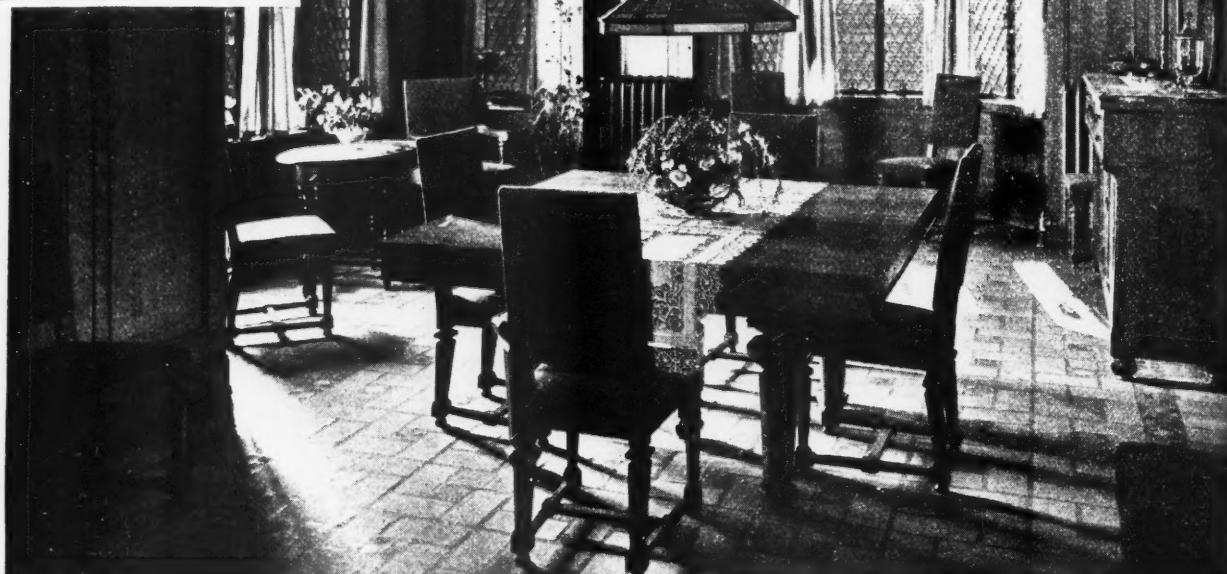
Address _____

City _____ State _____ (AB-1)

WHEN *it comes time to Sell-* this material does its own TALKING



YOU DERIVE the greatest benefit from Keramic Tiles when the tiles are set by experts. Their skilled workmanship is instantly apparent. Select your tiling contractor on the quality of his work.



KERAMIC TILES—real tiles—are today bringing quicker sales and greater profits to builders who understand the deep rooted hold which this beautiful and enduring material has on the modern home buyer.

First came the tile bathroom. But today the fastest selling houses have tile laid floors or wainscots in foyers, dining rooms, sun porches, breakfast nooks. People like houses planned with such distinctive touches. It

gives them a home of which they can be lastingly proud.

The beauty of Keramic Tiles—real tiles—mellows with age. Cleaning is simple and easy. There are never any repair bills after the installation of this durable floor material.

And your buyers know these things. Keramic Tiles do their own talking. They help you sell houses faster and for more money.

The picture above shows the color-

ful coziness, the cheer and warmth Keramic Tiles impart to a room.

Plan on using more of this distinctive material in the houses you build. The slight additional cost of using it is more than off-set by the greater prices you can ask and get when floors and walls are set with beautiful Keramic Tiles. Let your local tiling contractor show you sample patterns, colors and textures of this modern building material.

ASSOCIATED TILE MANUFACTURERS, INC.

420 Lexington Avenue, New York City

ALHAMBRA TILE CO.
AMERICAN ENCAUSTIC TILING CO., Ltd.
CAMBRIDGE TILE MANUFACTURING CO.
FEDERAL TILE COMPANY
FRANKLIN POTTERY
GRUEBY FAIENCE & TILE CO.

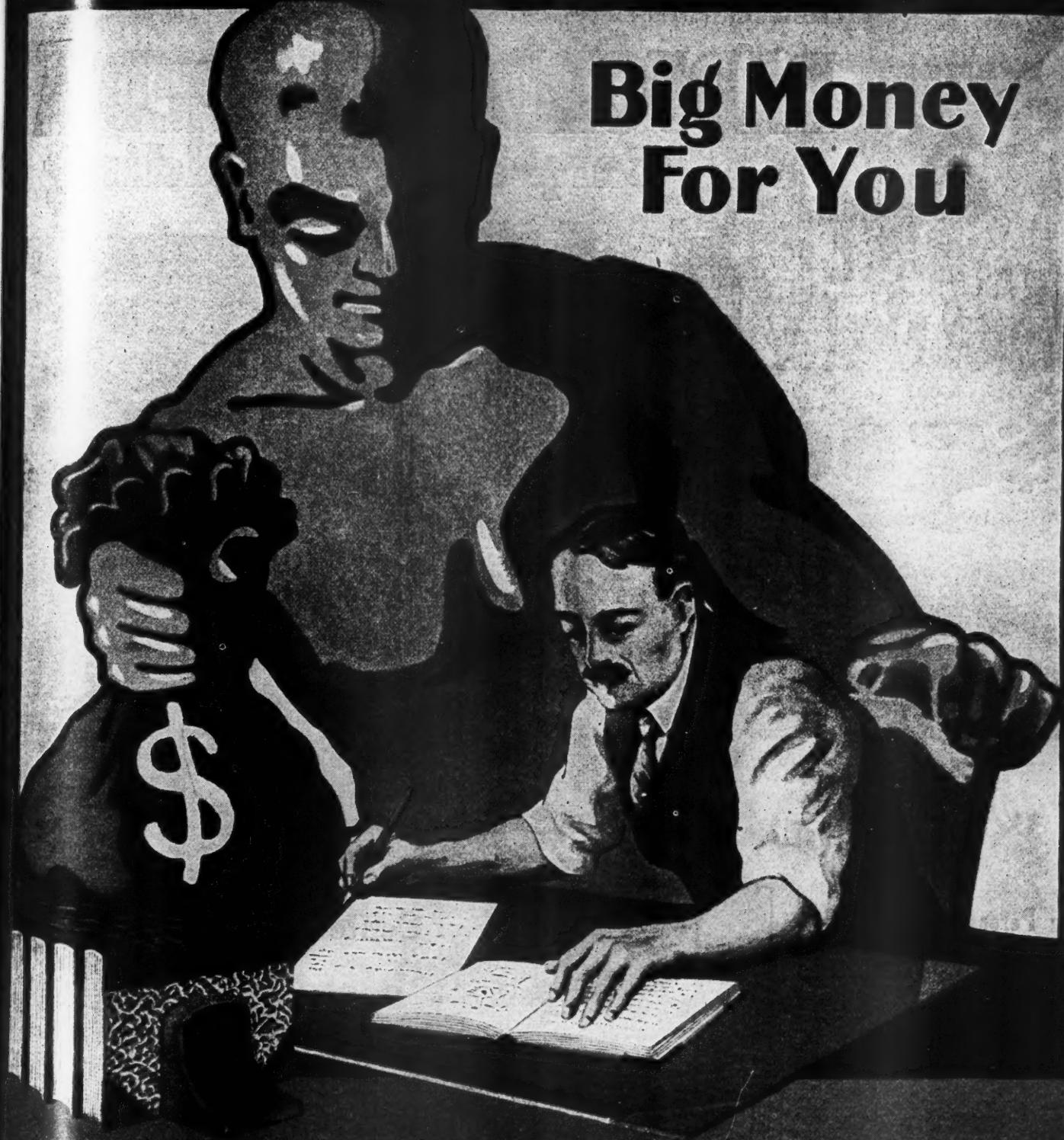
MATAWAN TILE CO.
THE MOSAIC TILE CO.
NATIONAL TILE CO.
OLEAN TILE CO.
THE C. PARDEE WORKS
ROSSMAN CORPORATION

STANDARD TILE CO.
THE SPARTA CERAMIC CO.
UNITED STATES ENCAUSTIC TILE WORKS
UNITED STATES QUARRY TILE CO.
WHEATLEY TILE & POTTERY CO.
WHEELING TILE CO.

K E R A M I C T I L E S

1028

Big Money
For You



Knowledge Brings
SUCCESS and PROSPERITY

**RADIO & TELEGRAPH
Cyclopedia
Construction**

**SEE OUR BIG SPECIAL OFFER
ON FOLLOWING PAGES**



RADFORD CYCLOPEDIA

Carpentry Building

**SENT
FOR ONLY**

\$5.00



*We Pay
Express*



Exact Photographic Reproduction Bound in Red Morocco Grain Fabrikoid

My Personal Guarantee

If you do not find the Radford Encyclopedia of Construction just as advertised and entirely satisfactory, or if for any reason whatsoever you do not wish to keep it after having had the free use of it for five days, I personally guarantee to refund your deposit immediately upon receipt of such information from you. I guarantee to prepay all carrying charges. I guarantee you will get this low price if ordered now. I guarantee to send you Three Plan Books of 300 Plans. I guarantee to furnish you with a complete set of blue printed working plans and type-written specifications, as per terms of this offer. I further guarantee you will receive one full year's subscription, twelve numbers, to the American Builder, conceded the world's greatest and best known Building Paper.

Don't hesitate a moment to hold me to this guarantee and notify me within the five-day limit, as we want every set of books we put out to remain only in the hands of appreciative and enterprising purchasers, as this price is made with the sole purpose of placing a set in your town to which we may refer later, and with the understanding that you write us your opinion of it to help secure other business at our regular price.

John Radford

President and Editor-in-Chief.

Partial Table of Contents—Radford's Cy Brief List—See

PERSPECTIVE DRAWING	Lettering.
Pen and Ink Rendering.	Blue-Printing.
HOUSE FRAMING	Working Drawings.
Good and Faulty Construction.	Architectural Drawings.
Construction of Sills and Joists.	BUILDING CON- STRUCTION
Studding.	Foundations.
Cornice.	Girders.
Porch Construction.	Cellar Windows.
Window and Door Openings.	TEMPERATURE REGULATION
How to Attach Woodwork to	Practical House Plumbing.
Masonry Walls.	The Sewer and Connections.
ROOFS AND ROOF CONSTRUCTION	Sizes of House Drains.
Lean-to and Saddle Roofs.	THE PIPING SYSTEM
Forms of Roof Trusses.	Layout of Plumbing.
Stresses on Roofs.	HOW TO USE THE HANDBOOKS
Strength of Beams.	Rivets and Riveting.
Dimensioning, Struts, Tie- Beams, etc.	Factor of Safety.
Roof Braces.	CLASSES OF STRUC- TURAL MEMBERS
Rafters and Purlins.	Design of Girders.
Hips and Valleys.	MANUFACTURE OF STRUCTURAL MEMBERS
Wall Plates.	Forge Shop.
Jack Rafters.	Painting Structural Steel.
Dormers.	Cost of Steel Structures.
Use of Queen Rafter	Erection of Steel Buildings.
To Support a Gambrel Roof.	Bridge and Viaduct Construction.
Construction of Circular Porch.	USES OF THE STEEL SQUARE
CONSTRUCTION OF STAIRS	Uses of the Figures, Lines and Scales.
Pitchboard.	Testing the Square.
Treads and Risers.	
Housed and Open Strings.	
Wall Strings.	
Straight and Curved Stairs.	
THE ELEVATION	
Intersections and Developments.	

Examine These Books

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

OF CONSTRUCTION

and Architecture



Oriental Gold-Leaf Letter. Actual size, 6 x 9 inches. 5,000 pages, 3,000 illustrations

cyclopedia of Construction—This is a Very Books Yourself

Miters for Polygons.
Five-Pointed Star.
Framing Timbers at Any Pitch.
Ornamental Figures in Miter Work.
Laying Off Degrees with Compasses.
Possibilities of the Steel Square.

HOUSE SANITATION
Heating and Ventilation.
Modern Heating Apparatus.

HOT-AIR HEATING
Size of Furnace Required.
Location and Size of Flues and Registers.

Heat Pipes.
Cold-air Supply.
Air Cleansing.

Furnace Ventilation.

MANUFACTURE OF CAST IRON
The Blast Furnace.

Sand and Machine Casting.
Grades of Cast Iron.

Wrought Iron.

ELEMENTS OF STEEL CONSTRUCTION
The Raw Material—Iron Ore.

Properties of Ore.

COVERING OF ROOFS
Method of Shingling.
Covering of Circular Dome.

MASONRY CONSTRUCTION
Kinds of Stone Work.
Rubble Masonry.
Cut Stone.
Bonds and Joints.
Mortar for Stonework.
Stone Cutting.
Stonecutters' and Masons' Tools.
Dictionary of Masonry Terms.
Foundations.
Walls.
Abutments.
Culverts.
Piers, Arches.

BRICK AND BRICKWORK
Brick Making Machinery.
Strength of Brick.

Porosity, Density, etc.
How to Test Brick.
Mortar for Brickwork.
Bricklayers' Tools.

REINFORCED CONCRETE
Durability.
Fire-resisting Properties.

Cost of Reinforced Concrete.
REINFORCED CONCRETE BRIDGES

Piers.
Abutments.
Viaducts.
Reservoirs.
Water Tanks.
Irrigation Canals.
Headgates and Flumes.
Sea Walls.
Concrete Telegraph Poles.

Concrete Railroad Ties.
Electric Light Standards.
Concrete Garage.
Concrete Sinks.
Mausoleums.
Burial Vaults.
Useful Tables.
Useful Rules.

MANUFACTURE OF CONCRETE

Proportion for Mixing.

Hand Mixing.

Machine Mixing.

Continuous Mixing.

Batch Mixing.

Wetness of Mixture.

Mixing Tools.

Time of Setting.

How to Regulate Setting.

Difference Between Setting and Hardening.

Cost of Concrete.

Strength.

Durability.

Fireproofing.

PLAIN CONCRETE CONSTRUCTION

Collapsible Metal Forms.

Construction of Forms.

Wood Forms.

Metal Forms.

CONCRETE HOUSES

Monolithic Construction.

Concrete Block Houses.

Plaster Work and Stucco.

Foundations.

**SENT
FOR ONLY**

\$5.00

*We Pay
Express*

How to Get Them

All you have to do is to write your name and address plainly on the coupon at the bottom of the next page, pin check, money order or draft to it and mail it to us. We trust you as a member of the building trade and send you the entire set of books immediately. We prepay all express charges and thus it does not cost you one penny for examination. When you get the books they are yours for five days to examine them just as leisurely and as carefully as you please. You have the privilege of calling in your family, your friends, your associates to look them over and help you to make a decision. After you have had the chance to go through them page by page, if you should decide that you do not want to keep the books, all that you have to do is drop us a postal telling us so. We will immediately send back to you the payment of \$5.00 which you sent us with the order blank. We do this without any argument, without any red tape and without any haggling whatever. Furthermore, we will remove the set of books without cost to you at once. Therefore, you are nothing out on the deal, you have not spent a cent, you have lost nothing whatever.

AT OUR EXPENSE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Open to New and Old Subscribers--Renewals Extended for One Year

The MAN WHO STOOD STILL!



THE MAN WHO STOOD STILL. He is one of the tragic figures of life. Day after day he follows in the same groove. In good health and in bad he has to work. Growing older and older he sees ahead no relief from the ceaseless toil that he has known all through life. There is no opportunity for him to cease a single day the everlasting "humdrum" that he has known for so long. When he had the chance there was no Cyclopedias such as this, at so low a cost, and so easy to get. He allowed other men—the men who had studied and knew how—to pass him by. They left him standing on the threshold of success. But they left him behind. He heeded not the beckonings of opportunity. He is THE MAN WHO STOOD STILL.

SPECIAL FREE PREMIUMS IF YOU ORDER AT ONCE

If we receive your order at once, we will send with this Cyclopedias one year's subscription (12 numbers) to the American Builder, the world's greatest building paper. We will send free of all extra cost, one complete set of blue printed working plans and typewritten specifications of any of the houses illustrated in three Books of Plans, which we also send to you free of cost, so that you may make your selection. These plans

and specifications are as complete as those charged \$50.00 to \$75.00 for by many architects. These plans will be very valuable to contractors, builders and draughtsmen. The only reason we can offer to do this is because we have the largest architectural establishment of its kind in the world, and are able to produce these complete blue printed working plans and specifications at the very lowest possible price, and to the purchasers of this big Cyclopedias we are willing to give the benefit. Without American Builder \$1.00 less.

We make this liberal offer because we want you to have our Cyclopedias, and we believe by having it in your hands we will have a greater opportunity of disposing of others in your locality, and it is with the distinct understanding that if it is entirely satisfactory, you will write us a letter and assist us in making other sales.

Our special price to you for advertising purposes is only \$37.50, and our liberal terms are only Five Dollars down and \$3.00 per month until the amount is paid. We give you five days to look the books over and see if they are entirely satisfactory. If you conclude not to keep them, we will refund your money and pay the express charges both ways. Order today. Fit yourself at once to increase your earning power.

The Radford Architectural Co., 1827 Prairie Avenue, Chicago, Ill., U. S. A.

RADFORD

Pin Check, Money Order, Draft or Currency to this Coupon and Mail Today

NO-RISK GUARANTEE COUPON

**RADFORD ARCHITECTURAL COMPANY,
1827 Prairie Ave., Chicago.**

Please send me, express prepaid, your 12-volume Cyclopedias of Construction, for five days' free examination, with privilege of return at your expense. I enclose \$5.00 deposit which you agree to return if I decide not to keep the books after examination. If I keep the books, I will pay \$3.00 a month until the special price, \$37.50, is paid, otherwise I will notify you within five days after receipt of books.

Your offer also includes Three Big Plan Books (over 300 designs) and one full year's subscription to the American Builder. You also agree to furnish set of Blue Prints and Specifications, if ordered within 2 months after acceptance of books.

Name.....

Street.....

Town.....

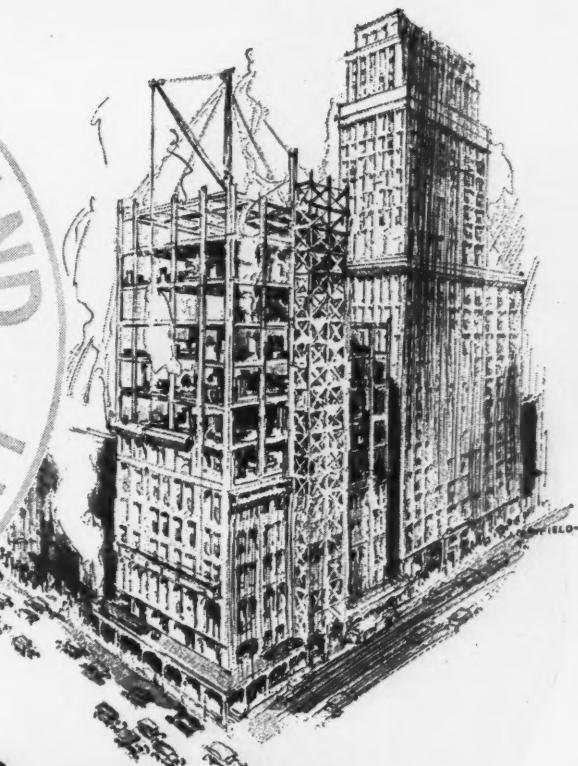
State.....

West of Rocky Mountains and Canada, \$10.00 with this order.
Full amount must accompany all Foreign orders.

A.B. 12-28

RADFORD

RADFORD



Earning Power can begin weeks earlier

THE construction of a large office or store building on an expensive site has one objective above all others — occupancy. Earning power must begin at the earliest possible moment.

And now comes a new magic in speeding construction which is hailed as one of the outstanding accomplishments of a generation.

It is Prestolith Velo Cement which makes concrete you can use in 24 hours. In other respects, the characteristic elements of Prestolith Velo are those of portland cement. It is used just as portland cement is used. It has the same setting time. Yet it effects an enormous saving in valuable time at a

negligible increase in cement cost.

The introduction of Prestolith Velo to the building industry indicates an inherent capacity for engineering service which has had a vital part in the rather unusual growth of the Missouri Portland Cement Company.

It represents an absorbing interest in the improvement of construction methods and materials which has prompted the investment of ability and money in the most exhaustive and conclusive tests of Prestolith Velo in the laboratory and in actual work on a commercial scale over a period of five years.

And it represents the vision of complete usefulness which has caused, as a result of these tests, the building of a new \$2,000,000 plant at Prospect Hill, St. Louis, for the exclusive and adequate production of Prestolith Velo.

Write for our booklet, "24-Hour Cement."



This is the emblem of the authorized dealer in Prestolith Velo and Red Ring Portland Cement. Through him, as the representative of the Missouri Portland Cement Company, is available the advice and engineering assistance of this entire organization.

MISSOURI PORTLAND CEMENT CO.

ST. LOUIS .. KANSAS CITY .. MEMPHIS

Manufacturers of Red Ring Portland Cement; Prestolith Velo Cement; producers and distributors of sand, gravel and Bethany Falls crushed stone.

MISSOURI PORTLAND CEMENT CO.
1911 Telephone Building, St. Louis, Mo.

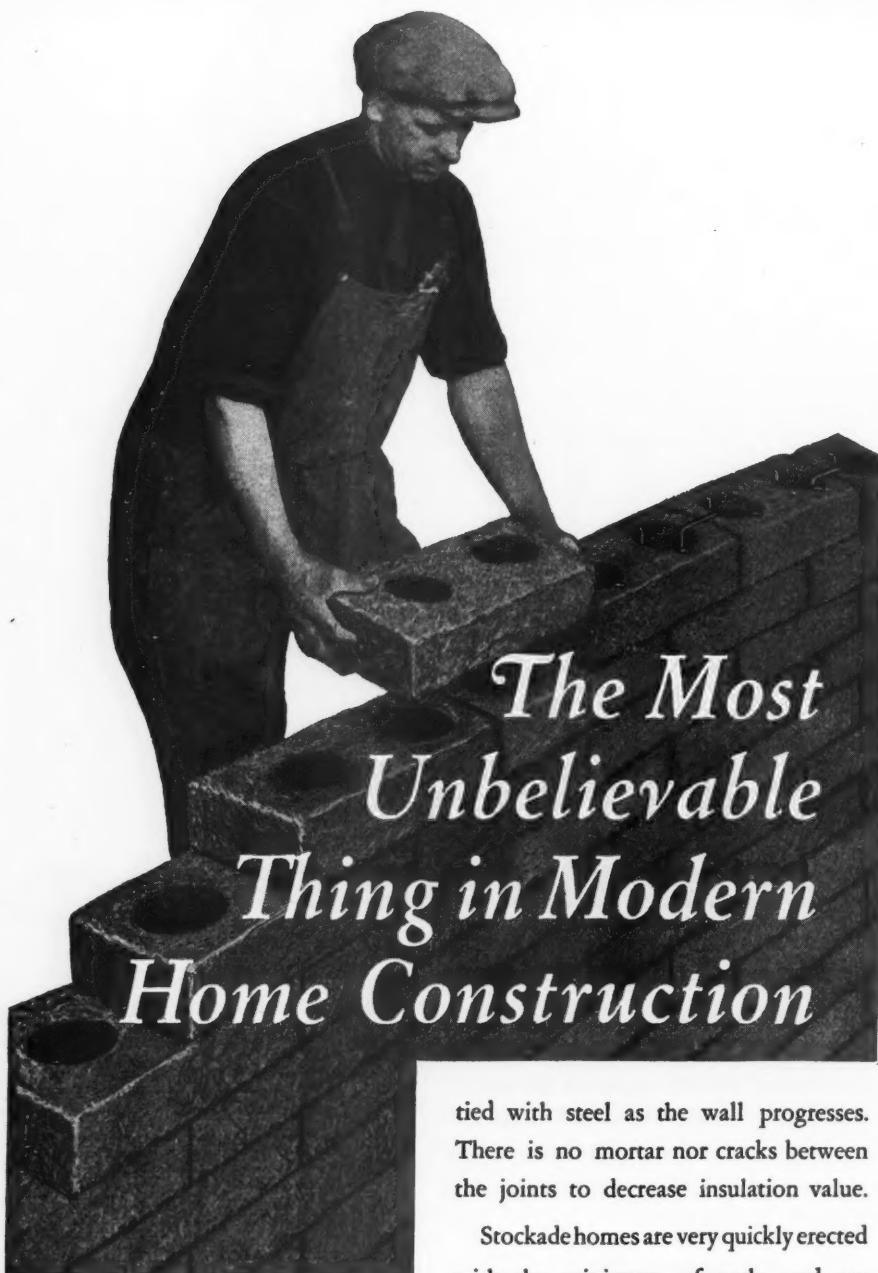
Please send me, without charge, your descriptive booklet, "24-Hour Cement."

Name.....

Firm.....

Street and No.

City..... State.....



The Most Unbelievable Thing in Modern Home Construction

HERE is a type of construction where the insulation is an integral part of the building—in fact the insulating units form the mold for casting concrete structural columns.

In strength the Stockade wall is equal to eight inches of solid masonry. It provides from 3 to 5 times the insulation afforded in most types of construction.

Stockade units are self-bonding—laid up without mortar—and the holes are filled with concrete and re-inforced and

tied with steel as the wall progresses. There is no mortar nor cracks between the joints to decrease insulation value.

Stockade homes are very quickly erected with the minimum of tools, and are immediately ready for any interior and exterior finish. Any finishing material bonds perfectly to the Stockade wall.

This type of wall construction makes a home that is always comfortable to live in—cool in

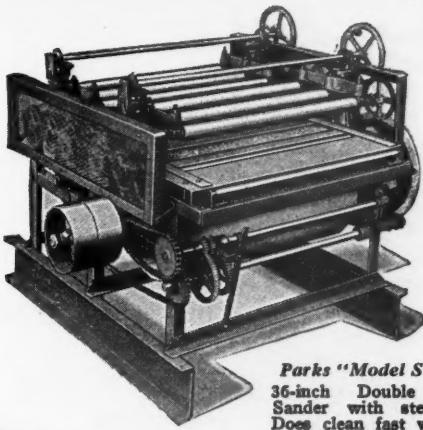
summer and warm in winter. Cold walls and resulting drafty rooms are impossible; therefore a decided saving in heating equipment and fuel bills. No other substantial construction can compare with Stockade in cost—to say nothing of the greater insulation made possible.

Many hundreds of Stockade homes of every type have been built during the past five years in widely scattered parts of the United States and under all climatic conditions. Stockade has completely qualified. Better structural engineering, great beauty, and utmost economy are all made possible with Stockade, a development of James Monroe Hewlett, the celebrated architect. A descriptive book will be sent on request. Ask for book AB-12.

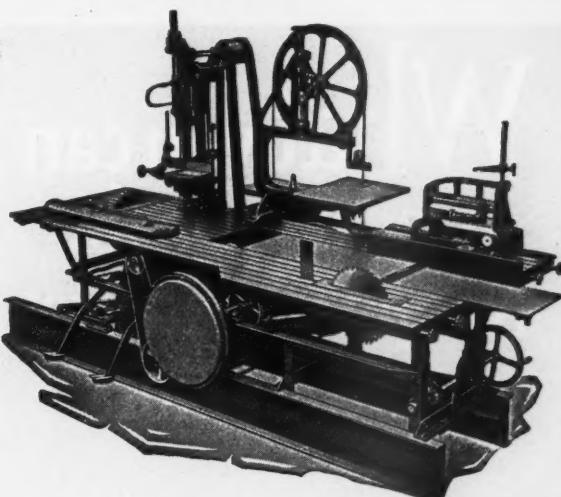
THE STOCKADE CORPORATION,
228 NORTH LA SALLE STREET, CHICAGO
and 347 MADISON AVENUE, NEW YORK CITY.

A STOCKADE HOME
at Scarsdale, N. Y.



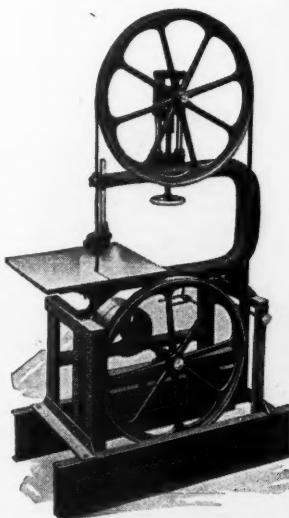


Parks "Model S" \$450
36-inch Double Drum Sander with steel bed. Does clean fast work on material as thin as one-eighth inch and as short as eight inches. Also 24-inch single drum size, \$225.

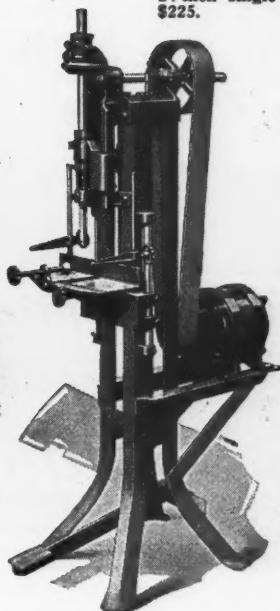


Parks "Planing Mill Special" \$590

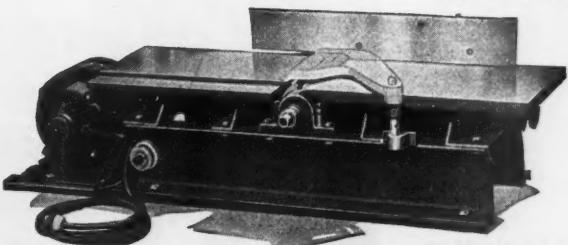
Thousands in use. Standard of value for 40 years. Eight essential machines in one. Capacity equal to any work a carpenter has. A complete shop in itself. 7½ h.p. runs everything.



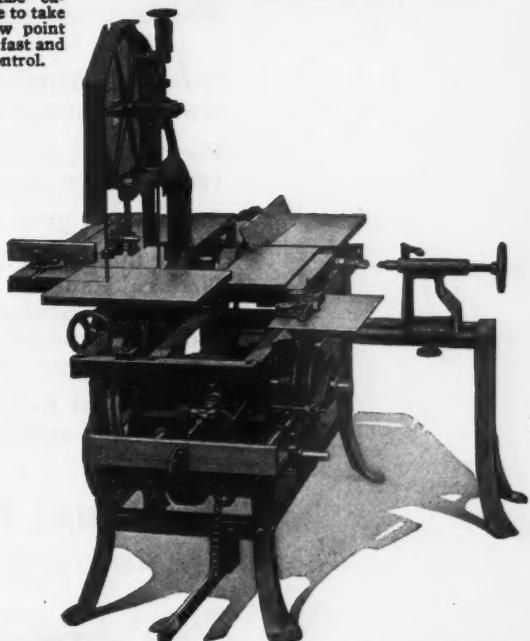
Parks "Century" \$100
30-inch Band Saw. Also 16, 22, and 36-inch sizes from \$50 to \$125, all built for real work.



Parks "New Rapid" \$170
Upright Hollow Chisel Mortiser and Borer, with motor. \$110 without motor. Large mortise capacity. Adjustable to take in 12 inches below point of bit. Powerful, fast and easy foot-lever control.



Parks "Daisy" \$135
9-inch bench jointer with motor, without motor, \$75. Round safety cutter head, high speed knives. You can't afford the time to push a plane these days!



Parks "Carpenter Shop Special" \$495
Circular Saw, jointer, band saw, lathe, shaper, mortiser. Ball Bearings throughout. Independent drive on every unit. 2 h.p. motor included. Smooth running, complete, convenient. All newest improvements and one of the most popular machines in the Parks big line of variety woodworkers.

Get set now for 1929!

Another busy building year is ahead of you, with more new houses needed for prosperous home builders and money to be spent in improvements and remodeling of old buildings! Be ready to take on more jobs and make more money. Get a Parks! Finish up more work with less labor and less cost. Cut down on "labor hire," that big item in every job estimate that eats up your profit. Fewer men can turn out more work for you with a Parks—and do it better. Get yours ordered before the rush begins. Make sure of first delivery.

Real work and more of it in 1929—Get a Parks! Write for complete catalog today.

THE PARKS WOODWORKING MACHINE COMPANY
Fergus & C. H. & D. Cincinnati, Ohio
Canadian factory: 338 Notre Dame East, Montreal

PARKS

WOODWORKING MACHINERY

Every Parks is guaranteed for ten years

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Lathes
Planers
Band Saws
Rip Saws
Swing Saws
Drum and Belt Sanders
Mortisers
Jointers
Combination Outfits
Write for complete catalog

What you can expect from the National Radiator Corporation

*Corcoran Courts Apartments, Washington, D.C.
Architect: Harvey Warwick.
Builder: The Cafritz Construction Company.*



A COMPREHENSIVE line of outstanding and exceptional products that will efficiently meet your every heating need. Performance, conclusively demonstrated over a period of years, on diversified heating applications of every character. Service that gives new meaning to a much-abused word. These things you can expect, and will receive, when you use National Radiator Products. Products which comprise the outstanding achievements of six great companies, backed today by a united responsibility, and widely distributed through a great chain of plants, offices and warehouses. In "National Radiator Products," you can expect quality, service, and satisfaction for your customers, and yourself.



NATIONAL RADIATOR CORPORATION

MANUFACTURER OF RADIATORS AND BOILERS



Nine Plants devoted to National Service through these Branch Offices and Warehouses:
 Baltimore, Md.—2600-2622 Matthews St.
 Boston, Mass.—93-97 Oliver St.
 Buffalo, N. Y.—259-265 Delaware Ave.
 Chicago, Ill.—2445 N. Keeler Ave.
 Cleveland, Ohio—935 E. 63rd St.
 Cincinnati, Ohio—Spring Grove & Elmira Ave.
 Indianapolis, Ind.—431 W. Georgia St.
 Johnstown, Pa.—221 Central Ave.
 Milwaukee, Wis.—124-130 Jefferson St.
 New York, N. Y.—55 W. 42nd St.
 Omaha, Neb.—108-112 S. Tenth St.
 Philadelphia, Pa.—121 N. Broad St.
 Pittsburgh, Pa.—1509 Arrott Bldg.
 Richmond, Va.—3032 Norfolk St.
 St. Louis, Mo.—1042 Central Industrial Ave.
 Washington, D. C.—2205 Fifth St., N. E.

**"A
REAL JOB,
FROM RIDGE TO BASEMENT!"**



When you stand off from the finished job and survey it with the critical gaze of long building experience, it's a great feeling, isn't it, to be able to say: "A *real* job from ridge to basement."

A real job, not because of superficial good looks . . . *that* might hide a multitude of deficiencies . . . but a real job because of the enduring materials put into it—materials which will fulfill all their intended functions year after year, decade after decade.

Good lumber . . . good brick . . . brass, copper and bronze wherever a non-corrosive, enduring metal is needed.

Chase Copper Gutters, Downspouts, Flashings, Chase "Alpha Brass Pipe", Chase Bronze and Copper Screens on a building, establish at once its sound character—make selling easier for the investment builder, and guarantee satisfaction to the ultimate owner.

Look for the new Chase-mark, shown below; the distinctive mark of an old firm which you know well. It identifies genuine Chase products.

CHASE BRASS AND COPPER CO.

INCORPORATED

WATERBURY · CONNECTICUT



Service? . . . Thirteen Chase Warehouses throughout the country mean that there's a Chase warehouse near you!

New York · Boston · Newark · Philadelphia · Baltimore · Cincinnati · Cleveland
Detroit · Chicago · St Louis · New Orleans · Los Angeles · San Francisco

BUILT TO ENDURE

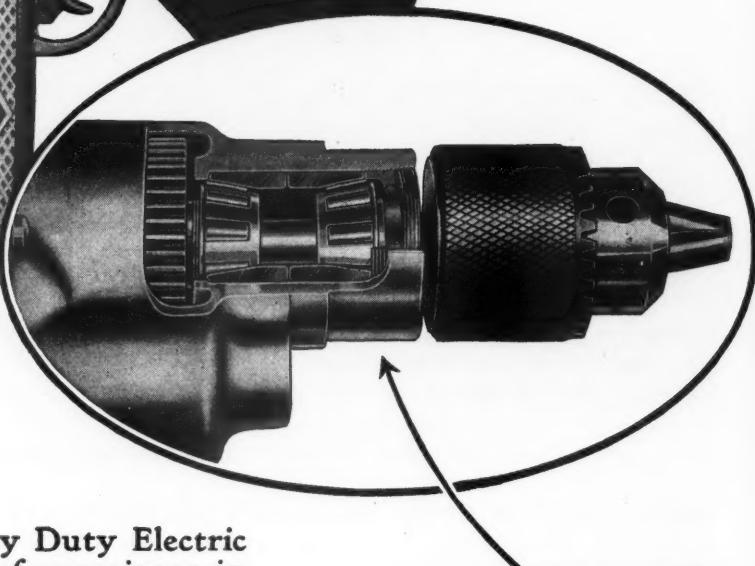


The complete line of Black & Decker Electric Tools is on sale at the leading supply houses.

The Black & Decker 3/4" Heavy Duty Electric Drill is the culmination of years of experience in designing and building high quality electric tools.

The above illustration showing a detail of the chuck spindle bearing construction is an indication of the engineering principles used throughout this Drill, justifying its ability to endure hard and continuous usage over a long period of time.

The Black & Decker name on an electric tool is your guarantee of quality.

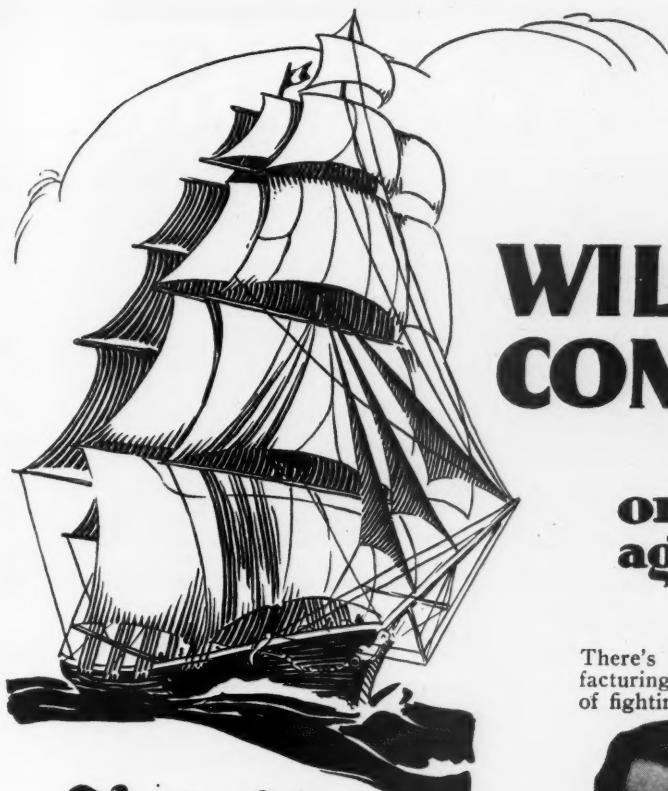


Taper roller bearings are used on the chuck spindle. These bearings very adequately take care of side and end thrusts and will give excellent service throughout the life of the Drill.

BLACK & DECKER

TOWSON, MD., U. S. A.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



**Their ships
are in!**



GEORGE D. FISTER
President of the Duntile Manufacturing & Supply Company, Allentown, Pa. This plant is running overtime to keep up with demand. Eighty per cent of volume is in mat-glazed Duntile which yields an extra profit margin from the mat-glazing process.



JOHN L. STRANDBERG
of Strandberg & Swanson, Kansas City. In three years, they multiplied their original investment in Duntile thirty-three times. They recently erected a new modern factory from earnings.



FRANK K. COFFEEN
Frank K. Coffeen and his partner, Frank F. Thompson, contractors of LaPorte, Indiana, went into Duntile eighteen months ago. In that period their business has yielded them a good income, paid for their machinery and they have now completed the purchase of a new manufacturing site for large scale production.

**Get into manufacturing
- Make 1929 profitable
This Book Tells How**



W. E. DUNN MFG. CO.
415 W. 23rd St., Holland, Mich.

Send me your latest edition of "Basic Facts" describing the non-competitive basis of Duntile manufacturing and explaining how I can manufacture Duntile in a plant of my own at a profit of 30 to 60 per cent. Include cost comparisons showing how Duntile makes possible masonry construction at price of frame.

Name.....

Address.....

WILL YOUR SHIP COME IN *in 1929?*

**or will you struggle
again with destructive
competition?**

There's a new year coming. Will it see you on the road to manufacturing independence? Or will you go on with the same old story of fighting bitterly for business in a field where conditions are getting more difficult every day?



"Give me non-competitive manufacturing"—says H. W. Sewall

"I want certainties, not gambles in my business," says Sewall. "I'd rather be the man who makes building materials than the man who puts them together. I like to know where I am at. It's great to know that if you do so much business you make a certain, definite profit. That's a whole lot better than taking a loss on one contract, making something on the next and never knowing until the end of the year whether you've made something for yourself or worked darn hard for the benefit of the other fellow."

"I was in banking before I started manufacturing Duntile. Maybe that's why I like a sure thing rather than a speculation. Anyway I've found in Duntile the manufacturing opportunity I wanted. And I can tell any man who is shopping around for a better opportunity that Duntile is a big enough proposition for any man's ambitions. And it's the only way I know of to get into the manufacturing game with limited capital."

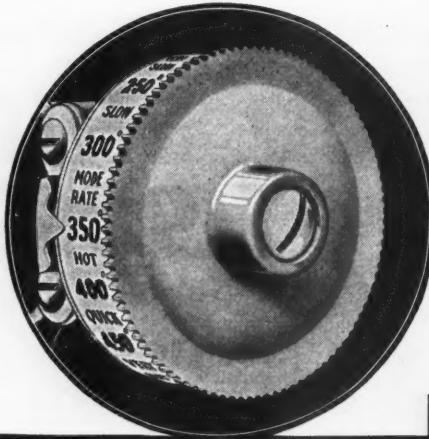
How Does The Year Stack Up For You?

Perhaps you, like many others, find competition in building growing keener all the time. Find it harder to show profits. Take losses too often. If this year has not advanced your financial position, why not take a good look at a business which has recruited scores of men from the building trades and put them on the road to manufacturing independence.

Duntile today stands on a basis of proven accomplishment. Learn why it builds better buildings for less. About its wonderful mat-glazed colors. Its universal uses. How men who manufacture it enjoy a steady, year around manufacturing business in protected territories. Examine the records. Weigh the evidence for yourself. But don't let another year come upon you without at least getting the up-to-date facts about Duntile. Use the coupon right now.

W. E. DUNN MANUFACTURING CO.
415 W. 23rd Street
HOLLAND, MICHIGAN

Unless the Gas Range has a RED WHEEL it is NOT a LORAIN



Do Women Like Your Kitchen Equipment?

(Above at right) Boulevard View Apartments, 2374 Euclid Heights Boulevard, Cleveland, Ohio. Architect, Max Weiss, Cleveland; Builder and Owner, I. Koslen, Cleveland.

(At right) Representative Kitchen in Boulevard View Apartments showing New Process Red Wheel Gas Range as installed.



ARE THE KITCHENS in the structures you build so equipped that they make instant appeal to the modern housewife? The modern housewife, you know, insists on cookery equipment that enables her to cook and bake via the *Time and Temperature Method*.

If your kitchen is not thus equipped, the prospective tenant is very apt to look elsewhere in order to find a kitchen that suits her ideas. And—nine times out of ten she will insist that the kitchen have a gas range with the Lorain (Red Wheel) Oven Heat Regulator.

As a case in point, the first woman to seek an apartment in the Boulevard View Apartments, Cleveland, Ohio, (shown above) insisted that she would have nothing but a Red Wheel Gas Range in her kitchen. Her request was granted—and the remaining suites were equipped with Red Wheel Gas Ranges.

The Lorain Red Whcel is the *original* oven heat regulator. It is the oven heat regulator that has been continually advertised for nearly ten years in the leading national magazines for women. It is the one device of its kind that is most widely and most favorably known among women.

These famous makes of gas ranges are equipped with the Red Wheel: Reliable, New Process, Dangler, Clark Jewel, Quick Meal and Direct Action. These Red Wheel Gas Ranges are used for cookery instruction in over 2600 leading schools and colleges. Each make offers every approved size, style and finish suitable for homes, apartments, schools, churches or other public structures where cooking is done.

For specific data see Sweet's Catalog, 23rd Edition, Pages C4009-C4018 inclusive. Catalogs and other data gladly sent upon request.

AMERICAN STOVE COMPANY, 233 Chouteau Avenue, St. Louis, Mo.
LARGEST MAKERS OF GAS RANGES IN THE WORLD

1928

LORAIN RED WHEEL

PURE LEAD - most beautiful and enduring of materials - is now available for Metalwork in inexpensive and workable form

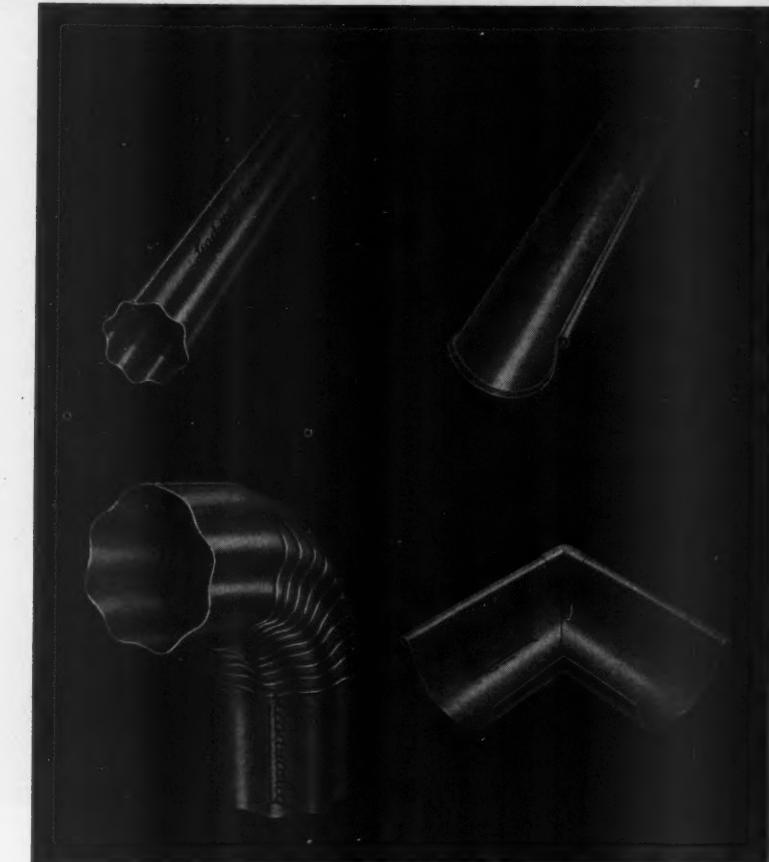
PROFIT by this DISCOVERY!

FOR years builders and sheet metal men have looked on pure lead as the ideal sheet for building metalwork—provided it could be amalgamated to a stronger and more workable base of steel. The means to secure a firm amalgamation were discovered in this company's Canton, Ohio, plant and put to commercial use as "Superior Lead-Sealed" sheets.

The Best Test

As roofing and siding on industrial plants, exposed to strong smoke, acids and salt air, Lead-Sealed has withstood years of the most severe test that metalwork can undergo. Sealed between heavy surfaces of imperishable lead, it shows no signs of deteriorating where more costly metal sheets have proved unsatisfactory.

An additional investment of about ten dollars will equip the average house with Superior Lead-Sealed metalwork. Being soft, level and of high ductility, it is readily formed into flash-



ing, conductor pipe, eavestrough, gutters, etc., without breaking or peeling of the protective lead. Any competent sheet metal worker can install it.

Adds Known Value

The increased value to your

building far exceeds the cost of using Lead-Sealed metalwork. Send for and examine a sample. We will gladly furnish you with complete information including costs, availability and use. Pin the coupon to your letterhead and mail, today.

THE SUPERIOR SHEET STEEL CO., Canton, O., Division of Continental Steel Corp.
—Makers of *Super-Metal*, *Galvannealed*, Galvanized and Long Terne Sheets



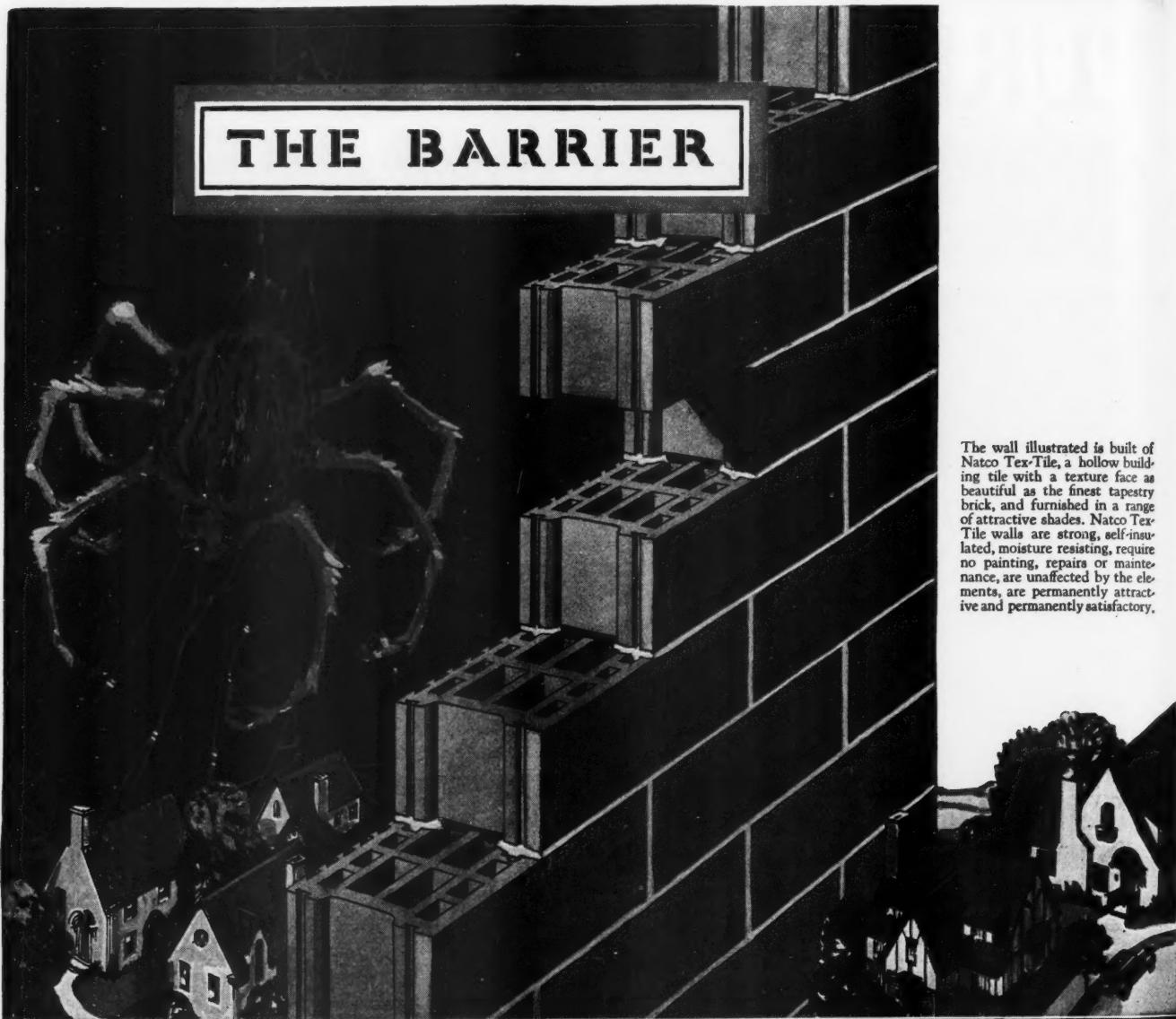
Superior
Lead-Sealed

The Superior Sheet Steel Co., Canton, O., Division of Continental Steel Corp.
—Makers of Super-Metal, Galvannealed, Galvanized and Long Terne Sheets.

Please send sample and detailed information on Superior Lead-Sealed.

Name.....

Address.....



The wall illustrated is built of Natco Tex-Tile, a hollow building tile with a texture face as beautiful as the finest tapestry brick, and furnished in a range of attractive shades. Natco Tex-Tile walls are strong, self-insulated, moisture resisting, require no painting, repairs or maintenance, are unaffected by the elements, are permanently attractive and permanently satisfactory.

NATCO SAVES HOMES FROM SLOW TURNOVER

HOMES constructed of Natco Hollow Building Tile have added qualities that move them faster—make them more profitable.

Stuccoed homes with walls of Natco Double Shell Load Bearing Tile are cooler in summer—warmer in winter—drier the year 'round. Ever free of the dangers of rust, rot, and warping; the tile holds the stucco permanently.

Brick faced homes with walls of Natco Header Backer have all these same insulating qualities; and they are permanently, intimately bonded.

Finished face homes built of Natco Tex-Tile and Natco Combed Face have insulating value—strength—fire safety—and a charm and attractiveness that will increase with the years; a freedom from maintenance that is a powerful appeal to any buyer.

Each member of the Complete Natco Line of Hollow Building Tile fills some building need. Makes the structure where it is used more comfortable—economical—permanently satisfactory.

NATIONAL FIRE PROOFING COMPANY

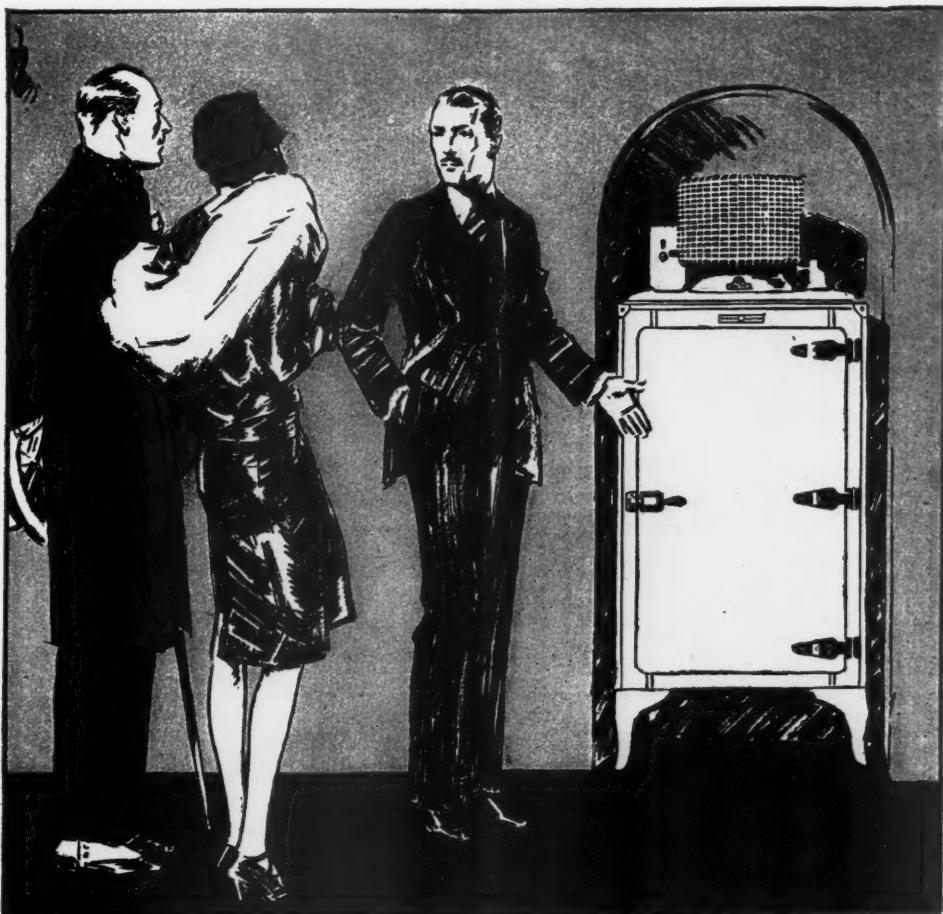
General Offices: Fulton Building, Pittsburgh, Pa.
Branch Offices: New York, Flatiron Bldg; Chicago, Builders Bldg; Philadelphia, Land Title Bldg; Boston, Textile Bldg.
In Canada: National Fire Proofing Co. of Canada, Ltd., Toronto, Ontario.

NATCO



HOLLOW BUILDING TILE

Thanks to the builder!



YES, the man who planned and erected this building persuaded me to put a General Electric Refrigerator in each apartment. He designed the kitchen spaces to fit.

"I thank him for his suggestion because it has so greatly speeded up the renting of the apartments. And it has caused much favorable comment from the tenants who are already in. They speak of these quiet, worry-free, automatic refrigerators as a special comfort.

"They are supremely simple and easy to install. All their mechanism is sealed in an air-tight steel casing. They never need oiling. They operate with unusual quietness—and use little current.

"One of the things which greatly influenced my choice was the fact that these refrigerators are made and guaranteed by General Electric."

If you want complete specifications of the various models, just ask us for Catalog AB-12. Or for this information in a briefer form, see pages C3056-9 in Sweets' Architectural Catalog.

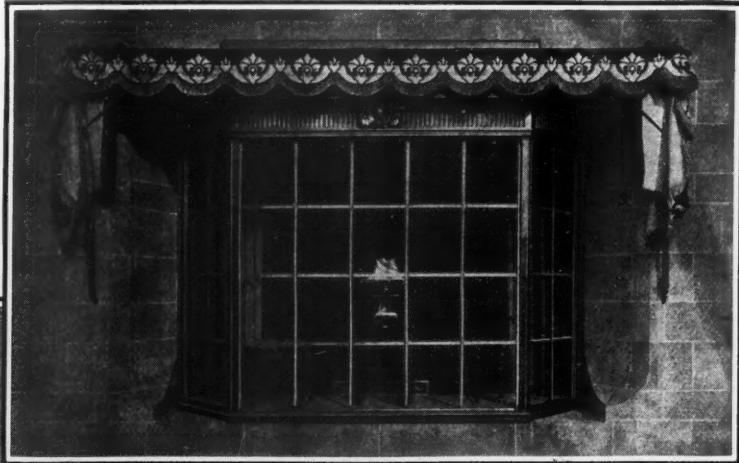
GENERAL ELECTRIC Refrigerator

"Makes it Safe to be Hungry"

ELECTRIC REFRIGERATION DEPARTMENT • OF GENERAL ELECTRIC COMPANY • HANNA BUILDING • CLEVELAND, OHIO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Thielbar and Fugard, Architects



Store Front Bronze

These pictures again tell the story of what can be readily accomplished with our standard sections of Extruded and Cast Bronze, ready for immediate delivery.

All the store fronts in this building were fabricated from our standard shapes. The entablature assembly of the small bay window consists of an Extruded Architrave and cornice with a cast bronze frieze and cartouche.

The assemblies on the main store front were accomplished with Extruded Bronze throughout, with cast bronze end brackets for the awning transom.

Our details, consisting of nine sheets, should be in your files.

Modern Bronze Store Front Company

ASSOCIATED COMPANIES:

INTERNATIONAL

ZOURI DRAWN METALS COMPANY
INTERNATIONAL STORE FRONT COMPANY
STANDARD STORE FRONT CONSTRUCTION CO.
MODERN BRONZE STORE FRONT CO.
ZOURI COMPANY OF CALIFORNIA
ZOURI DRAWN METALS CO., OF NEW YORK, INC.

DISTRIBUTION

Factory and General Offices: Chicago Heights, Illinois

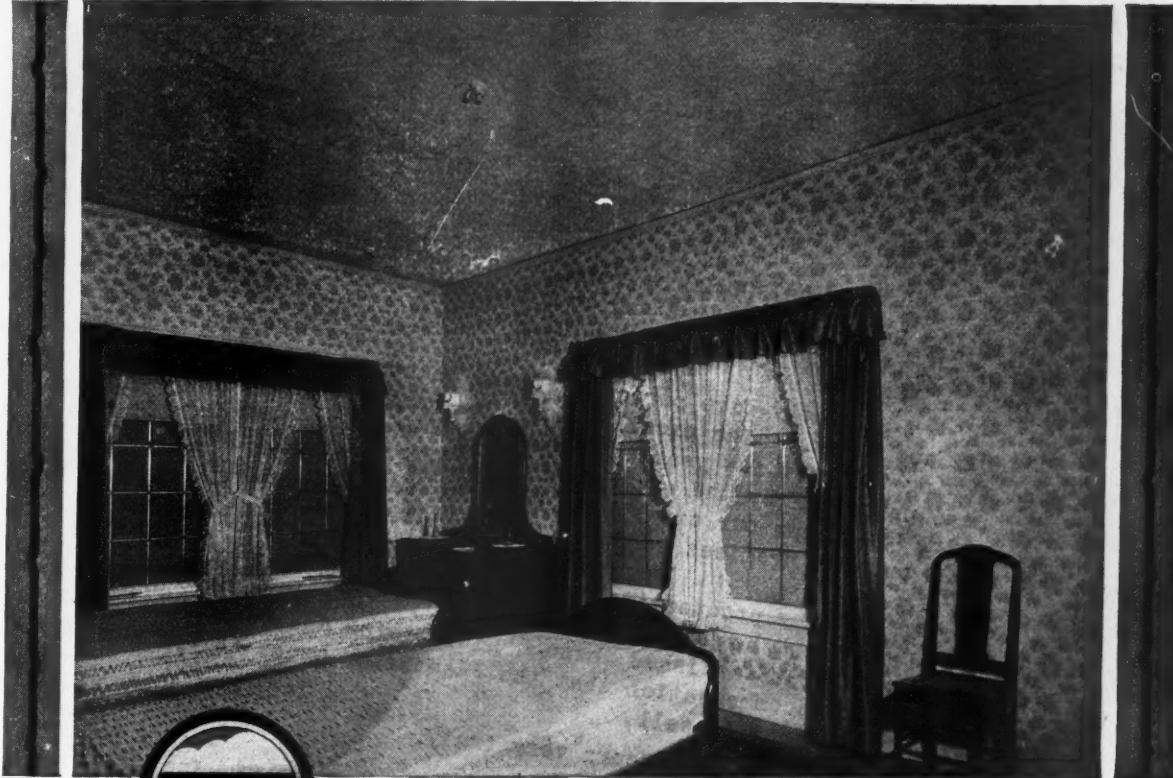


PLASTERING IS 90% OF THE VISIBLE INTERIOR OF THE HOME

PLASTERERS TELL YOU -

Only with LIME

can perfect walls and ceilings be built



PLASTER with LIME

Plaster is a word too often used in a broad sense. There are many kinds of plaster. Specify LIME plaster for this very important building item.

Only when favored with the opportunity of working with lime can the plasterer demonstrate the height of his ability as a craftsman. You can have excellent lime-plastered walls and ceilings at only 10% of the total cost of building . . . Use lime, the assured base for decorating or papering. Specify Gibsonburg, Ohio's Super-Finish, a snow-white, pure, very easily worked and uniform product. Apply over wood or metal lath.

THE GIBSONBURG LIME PRODUCTS COMPANY : GIBSONBURG : OHIO

Gibsonburg
finishing Lime

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

EVERY KNOWN KIND OF INSURANCE

J.C. FERGUSON REALTY COMPANY INC.

WE HAVE THE FACTS - LET'S DISCUSS IT.

NOTHING BUT RESIDENTIAL PROPERTY

J. C. FERGUSON, President
R. FLETCHER, Mgr. Insurance Dept.

610 GRAND AVENUE
PHONE WALNUT 991

"...the FACE BRICK house is by far the easiest to sell"

Des Moines, Iowa
June 8th, 1928

American Face Brick Association,
130 North Wells Street,
Chicago, Ill.

Gentlemen:

For \$8,500.00 or less, we are building to order in Des Moines attractive and substantial Face Brick houses of six or seven rooms.

Ninety-five per cent of the houses we build are of Face Brick. The excellence of the houses we have sold during the last few years and our easy financing plan -- made practical by the way Face Brick dwellings hold their value -- keeps our crews busy building to order. Our 1928 program promises to reach forty houses.

Many prospective buyers refuse to look at any but Face Brick homes. The advantages of this type have been so well established through advertising and person-to-person recommendation that the Face Brick house is by far the easiest to sell.

Yours very truly,

J. C. FERGUSON REALTY COMPANY, Inc..

Oscar Powell
By Treasurer.

THE added salability of Face Brick houses has become so pronounced that many builders now find it good business to specialize in homes built of Face Brick. Four years ago J. C. Ferguson Realty Company, Inc., Des Moines, began building Face Brick houses to sell. Quick and profitable sales were the result. And today their crews

are kept busy building only to order. Their experience, as told in their letter above, is typical of the thriving, substantial business which is the result of using Face Brick. Builders tell us that our literature and house plans are a real aid in building and selling. May we send you information concerning them? Send your letterhead or card to

THE AMERICAN FACE BRICK ASSOCIATION

2163 City State Bank Building, Chicago, Illinois

If you live in Canada please write to 26 Queen St. East, Toronto, Ont.

FACE BRICK

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Bostwick ANNOUNCES THE FIRST "CROSS-RIGID" METAL LATH

THIS new Super-Bostwick has all the merits of the old reliable "Truss-Loop" in still greater degree.

It has the same raised truss—the most effective known form of integral bracing.

It has the same stiffening ribs, running lengthwise of the sheet.

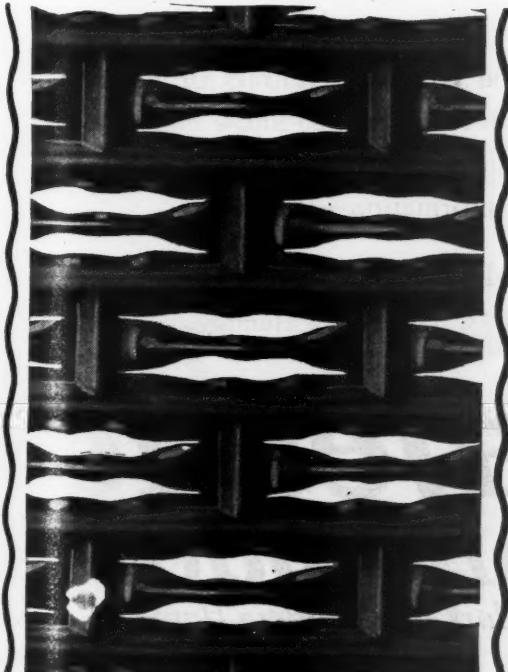
Besides, it has a cross-rib, so that each truss is surrounded by a rectangular rib structure.

It is a stiffer lath, offering rigidity against both longitudinal and lateral bending strains, an easier lath to handle and apply, requiring a minimum of side tying.

Finally, it is the most satisfactory and economical lath to plaster—as shown by actual tests and enthusiastically attested by lathers who have tried it.

Cross-rigidity is an important principle in lathing and plastering practice. However stiff a lath may be lengthwise, pressure tends to make it belly or sag between supports and thus draw away from the side.

PATENT APPLIED FOR



A lath that is also stiffened laterally, minimizes these tendencies. It largely does away with the need of side tying.

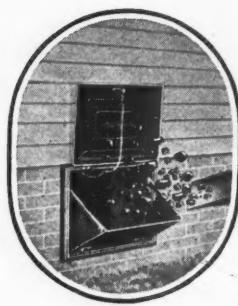
Trowel strokes across the overlap of the Super-Bostwick do not force the sheets apart and thus waste plaster that slips through the joint.

A sample of this new lath is yours for the asking. Better still, give your dealer a trial order and prove for yourself all that leading plastering contractors are saying on its behalf.

THE BOSTWICK STEEL LATH COMPANY
2112 Griswold Drive • Niles, Ohio

THE NEW
SUPER Bostwick
TRUSS-LOOP LATH

PLAIN FACTS



THE MAJESTIC COMPANY
300 Erie St., Huntington, Ind.
Please send catalog and prices of Majestic Coal Windows and other Majestic products that help sell homes.

Name.....

Address.....

City..... State.....

A LOT OF HOUSES built during the past year still have "for sale" signs on them. But the builder who put real value into his homes had little trouble in selling them readily—and profitably.

These "real value" homes invariably contained a goodly number of features contributing to comfort, convenience and economy.

Among the better-known products that add to the value of a home are—Majestic Coal Windows, Underground and Built-in Garbage Receivers, Milk and Package Receivers, Fireplace Dampers, etc. Small items in cost, yet mighty important reminders of extra quality in the home.

Whether you build on contract or build to sell, you owe it to yourself to know more about Majestic building specialties. Mail the coupon for complete information—now.

THE MAJESTIC COMPANY

300 Erie Street

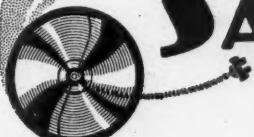
Huntington, Indiana

***Majestic
Coal Window***
The Mark of a Modern Home

The Reid-Way

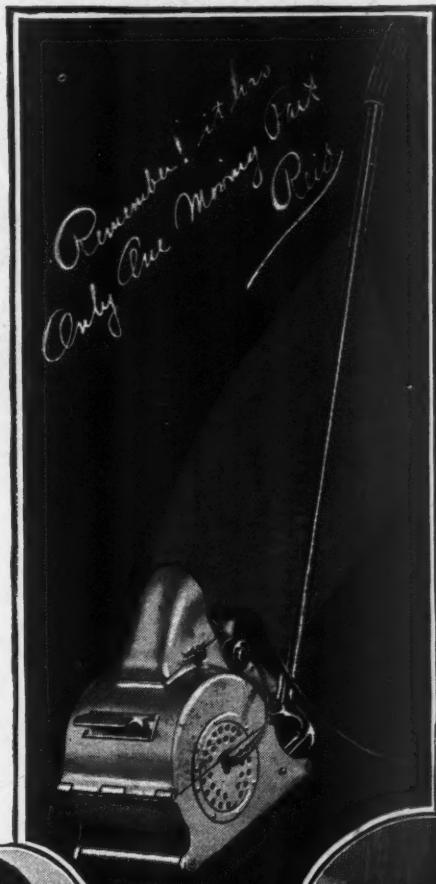
WHIRLWIND

SANDER



NOW comes a new and better Reid-Way sander. Unchanged in principle—one moving part is still the paramount feature. After three years of practical tests in the hands of users, certain changes and improvements have been suggested. The most practical of these have been incorporated in the design of the Reid-Way Whirlwind. In addition to those features which have made the Reid-Way the most popular light sanding machine, the new Reid-Way Whirlwind has more efficiency—positive control—does one-third more work. Completely enclosed to insure the safety of operators. Light—fast cutting—dustless. No increase in price. Use the coupon for details

Perfect control and ease of handling insured with the Whirlwind model through the use of ball-bearing guide rollers. A convenient handle on the front facilitates bench sanding.



Inverted in a special base the Reid-Way Whirlwind becomes an efficient jointer.

The REID-WAY Co.
724 North Sixteenth Street
CEDAR RAPIDS, IOWA

Reid-Way Company,
724 North 16th Street,
Cedar Rapids, Iowa.

Gentlemen: Please send me circular describing the new Reid-Way Whirlwind Sander.

Name _____

Address _____

Burroughs

Electric CALCULATOR

\$300

DELIVERED
U. S. A.



There is no faster
Method for *Calculating*

AROUND *the* FAMILY TABLE



Prompted from the Back Seat

The driver of a Ford sedan, who was plainly out of his element in city traffic, attempted to turn around in the middle of a block, and was sideswiped and upset by a hook and ladder fire truck on its way to answer a call.

Striding over to the overturned vehicle, a traffic officer poked his head through the broken window and demanded: "What do you mean by blocking traffic like this? C'mon outta there, you're pinched!"

"You let him alone!" said a female voice from the back seat. "How did we know them drunken painters was going to run into us?"

+

Two Essentials in Building

"How is your new house coming on?"

"Splendidly. We've got the roof and the mortgage both on."

+

Change Your Advertising Copy

If your advertising isn't pulling as it should, the fault may not be with advertising but with the kind of copy you are using. Just make a change in your appeal. That's what the little boy in the story did. You remember that a lady of uncertain age was called to the

Plenty of Business for Those Who Go After It

Said the little young red rooster, "Gosh all hemlock! Things are tough.

Seems that worms are getting scarcer, and I cannot find enough;

What's become of all those fat ones is a mystery to me. There were thousands through that rainy spell—but now where can they be?"

The old black hen who heard him didn't grumble or complain

She had gone through lots of dry spells, she had lived through floods of rain.

So she flew up on the grindstone, and she gave her claws a whet,

As she said, "I've never seen the time there weren't worms to get."

She picked a new and undug spot; the earth was hard and firm,

The little rooster jeered, "New ground! That's no place for a worm."

The old black hen just spread her feet, she dug both fast and free,

"I must go to the worms," she said; "the worms won't come to me."

The rooster vainly spent his day, through habit, by the ways Where fat round worms had passed in squads back in the rainy days.

When nightfall found him supperless, he growled in accents rough,

"I'm hungry as a fowl can be. Conditions sure are tough."

He turned then to the old black hen and said, "It's worse with you,

For you're not only hungry but you must be tired, too.

I rested while I watched for worms, so I feel fairly perk; But how are you? Without worms, too? And after all that work?"

The old black hen hopped to her perch and dropped her eyes to sleep,

And murmured in a drowsy tone: "Young man, hear this and weep;

I'm full of worms and happy, for I've dined both long and well;

The worms are there as always—but I had to dig like hell!"

—“Doorways,” published by Richards-Wilcox, Aurora, Ill.

door of her cottage by a shaver of a lad.

Lad: "Does 'oo want to buy some tute 'ittle tittens?"

Lady: "What did you say?"

Lad: "Does 'oo want some 'ittle tittens?"

Lady: "What is it?"

Lad: "Does 'oo want to buy a dam dood tat?"

+

For Your Bad Debts

After vainly trying to collect \$40.00 due him from one of his customers the colored man consulted his lawyer.

"What reason," his lawyer asked, "does he give for not paying you this money?"

"Boss," said the colored gentleman, anxiously, "he's gimme a mighty good reason, sah."

"Well, what is it?"

"He done say, Boss, dat he's been ownin' me dat money so long dat de interest has et it all up."

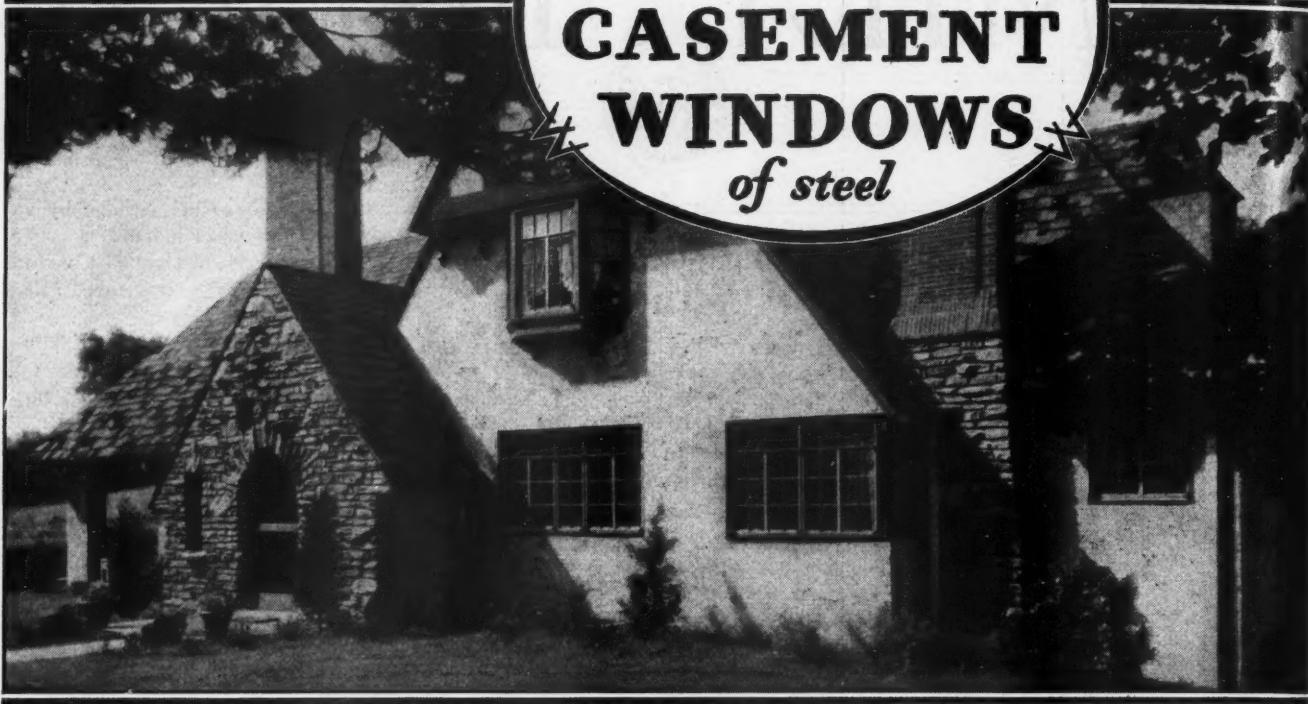
+

Can You Blame Him?

A certain Chicago advertising man is noted for his thriftiness. Strangely, he is of Scotch descent. Imagine our amazement, at a recent select, little dinner, to hear him call for the check. He blushed as he looked at it, but paid it like a man.

The next day's paper carried this headline:

"SCOTCHMAN MURDERS VENTRILLO-QUIST."



fenestra

CASEMENT

WINDOWS

of steel

“After two years’ consistent use
 • • • • very favorable”

“We have no hesitancy in thoroughly endorsing your casement windows, and after two years’ consistent use of this product are very favorably impressed with its adaptability in architectural design, its absolute weathertightness under some of the most trying conditions, and the general satisfaction our clients have expressed in these installations.

“Thanking you for past favors, we are,

Yours very truly,

H. W. CORDES & SONS, Architects

Cincinnati, Ohio.

(Signed) W. W. Cordes.”

Cost Little and Help Sell Houses

Fenestra Casements cost little, if any, more than ordinary windows. And they cost less to install, because they come to the job *complete*—hinged, painted, et cetera.

Among the first things seen by your prospective buyer are the windows. With Fenestra Casements, *first impressions* will be *favorable*. Try them in your next building—they’re quickly available from a local dealer.

DETROIT STEEL PRODUCTS COMPANY, 2304 EAST GRAND BLVD., DETROIT, MICH.
 Factories: Detroit, Michigan, and Oakland, California. Convenient Warehouse Stocks.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



AMERICAN BUILDER

Formerly AMERICAN CARPENTER AND BUILDER

105 West Adams St., Chicago—120 West 42nd St., New York City

Building Continues Active

NEW building and engineering work contracted for in the 37 states east of the Rocky Mountains during the past month was the highest October contract total on record, according to F. W. Dodge Corporation. Last month's total, \$597,103,500 in amount, was three per cent ahead of the September, 1928, total and it was six per cent over the October, 1927, total. The above figure includes about 91 per cent of the country's total construction and is segregated into eight districts. When comparisons were made with the October, 1927, records, it was found that the only district where there was a decrease was the Middle West.

The October building record brought the total amount of new construction started in these states since the first of this year up to \$5,724,047,600, as compared with \$5,359,297,900 for the corresponding period of last year, the increase being seven per cent.

Analysis of the October contract total showed the following outstanding classes of work: \$239,691,900, or 40 per cent of all construction, for residential buildings; \$148,696,500, or 25 per cent, for public works and utilities; \$67,330,400, or 11 per cent, for commercial buildings; and \$62,258,700, or 10 per cent, for industrial projects.

New contemplated projects, as reported last month in the 37 Eastern States, reached a total of \$616,933,100. This was an increase of 18 per cent over the amount reported in the preceding month and a gain of one per cent over the October, 1927, total.



Rents Continue to Decline

RENTS for small houses and apartments such as are occupied by families of moderate means, on the average for the United States, have continued to decline during the past year and at nearly twice the rate of the preceding two years, according to the National Industrial Conference Board, 247 Park Ave., New York. Average rents in July of the current year were 4.2 per cent lower than in July of the previous year, against a decrease of 4½ per cent from July, 1925, to July, 1927. Average rents for the country as a whole are now nearly 13½ per cent lower than they were at their post-war peak, which they reached in July, 1924. These data are based on information collected in both large and small cities in all sections of the United States. Inasmuch as the above cited figures are national averages, they do not necessarily apply to any one single locality.

Of the 180 cities reporting to the Conference Board's Cost of Living department, 123 reported no change from a year ago, 47 reported decreases and in only 10 cities increases were noted. Rents appear to be most stable in the East and in the South; 45 out of 62 cities in the East reporting no change, and lower rents being reported from 17 localities; out of 27 southern cities, 20 reported no change, 5 decreases in rents and only two showed increases.

Of the 68 cities in the Middle West, 42 reported no change from last year, 22 indicated decreases in rents and in four there were increases. In the Far West there were

no changes in 16 cities out of a total of 23; decreases in three and increases in four cities. In 13 cities of the 25 largest in the country, rents were reported as showing practically no change from July, 1927, to July, 1928.



Value of Sub-Floor Proved

THAT the addition of a subfloor has a valuable stiffening effect in wooden floor construction is confirmed by recent tests at the Forest Products Laboratory, U. S. Forest Service, on 30 different constructions conforming to floor designs and conditions met with in common practice. These tests indicate that a subfloor adds very appreciably to the strength of a floor system by distributing loads placed upon it, reduces floor distortion and vibration, diminishes the cracking of plaster, and probably decreases floor squeaking.

Under a load such as is represented by a piano or other piece of furniture, the joists supporting a floor are deflected or bent. One effect of this bending of the joists is a bending of the lath and plaster on the ceiling below, which may cause the plaster to crack. It was found that a subfloor of ordinary thickness, added to a floor system consisting of a one-inch hardwood floor on 2 by 10-inch joists, 12 feet long and 16 inches apart, reduced the total deflection or bending of an individual joist approximately 30 per cent and its deflection with respect to adjacent joists approximately 40 per cent. Less bending of the individual joists means less tendency for the plaster on the ceiling beneath to crack.

Many houses and apartments are still erected without subfloors and with the finish floors supported directly by the joists. That a subfloor has advantages, however, which should not be overlooked, is conclusively demonstrated by the laboratory's study.

"The use of a subfloor," says the laboratory authority, "very often affords a degree of satisfaction to the home owner that far outweighs its additional cost."



Study Building Depreciation

RECOMMENDATIONS as to the number of years which practical experience points may be expected to be the normal life of various types of buildings have been made to the Commissioner of Internal Revenue by the National Association of Real Estate Boards. These recommendations were made at the request of the bureau, which asked for such a statement to enable it to set up a schedule of normal rates of depreciation and obsolescence of buildings for the purpose of determining allowable deductions in the making of income tax returns.

The findings of the Real Estate Board constitute the most careful study that has ever been attempted of the normal expectation as to the length of useful life of all types of buildings under every type of construction. The experience of 111 cities has been tabulated and summarized in three ways: by sectional distribution of cities, by cities grouped according to size, by cities grouped according to rate of growth. In addition the data has been classified for each type of construction under 13 classes.

Draw Your Own Conclusions

From These Actual Job Tests

Concrete as commonly mixed and placed reaches a compressive strength of about 2000 pounds per square inch in 28 days. The following examples show what you can accomplish with the standard grade of Universal cement in a fraction of this time.

2494 lb. concrete in 3½ days

Heavy-Duty Foundry Floor
Du Bois, Pa.

Alfred Johnson, Du Bois, Pa., contractor

2780 lb. concrete in 3 days

Street Pavement
Lake Forest, Ill.

Johnson & Anderson, Chicago, contractor

2255 lb. concrete in 65 hours

Bridge Floor
Minot, N. Dak.

P. L. Elliott, Minneapolis, contractor

2655 lb. concrete in 2½ days

Sewer (Intercepting Chamber)
Chicago Sanitary District

E. J. Albrecht, Chicago, contractor

2047 lb. concrete in 20½ hours

Highway Pavement
Amnicon Falls, Wis.

A. N. Nelson, Duluth, contractor

4387 lb. concrete in 3 days

Street Intersection
Downers Grove, Ill.

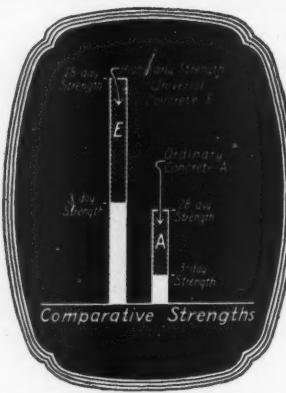
A. E. Bounzall, Kenosha, Wis., contractor

3303 lb. concrete in 7 days

Manholes for Conduit
Chicago (Commonwealth Edison Co.)

Bates & Rogers Construction Co.

Chicago—Cleveland



When You Get One, You Get All Three

1. Strong concrete in 3 days

With the usual materials, usual equipment, usual labor and usual Universal cement, you can secure at 3 days, concrete that is stronger than ordinary concrete at 28 days.

2. Permanently stronger concrete

As shown in the diagram above, High-Early-Strength Universal Concrete not only has a high 3-day strength but is *permanently stronger* than concrete as ordinarily mixed and placed.

3. Denser and more durable concrete

In addition, the methods by which High-Early-Strength Universal Concrete is obtained produce a denser and more durable concrete.

Description of methods for securing on the job strengths comparable to any of those shown above will be sent on request.

Universal Portland Cement Co.

SUBSIDIARY OF U. S. STEEL CORPORATION
Chicago Pittsburgh Minneapolis Duluth Cleveland Columbus New York

One Standard Cement for All Concretes and Mortars



A Brand New Booklet—
Mail the coupon for your copy

Name _____

Address _____

Universal Portland Cement Co.,
208 So. La Salle Street, Chicago,
Without obligation, please send me
your new booklet giving strengths
obtained by securing strengths
in 3 days with
the usual materials
and labor.

AB 12-28

EVERYBODY'S BUSINESS



More Science—More Business Hazards

By FLOYD W. PARSONS

FIVE new inventions a minute! Who can say that his job is safe? Who can be sure that his business is permanent? The developments of each day open fresh paths to travel. The unexpected discovery of a new material may mean the passing of an old industry and the creation of a new one. Too many of us are like the lightning bug that has a torch on the rear end. He can see where he has been but not where he is going.

Science has created unparalleled benefits for mankind. But in so doing it brought distress to many who were unable to foresee the future and adjust themselves speedily to the radical changes that took place. For instance, our most modern locomotive is capable of replacing two of those that were in service only a comparatively few years ago; and yet these most recent machines burn the fuel of only one of those that were replaced. This notable advance in practice and construction was fine for the railroads, but it was hard on the producers of bituminous coal.

The development of chemistry has brought us unmeasured benefits, but in hundreds of places this progress has caused upsets in industry. Manufacturers

have saved hundreds of thousands of dollars in recent years by changing their methods of purchasing raw materials so that moisture content is given proper consideration. But some of the producers of the same raw materials found that their sales were thereby greatly restricted. Immense dividends are being earned by the railroad and other industries on their investment in research upon boiler-feed waters. One railway finds that a water-treating plant pays for itself each year. On a second system there is one run of 563 miles that formerly required three

or four engines. Now by employing chemists to treat the different waters used, this run is made with a single locomotive.

Similar research is responsible for extending the lifetime of boiler tubes from an average of seven months to thirty months. With a single railroad operating as many as 1,700 locomotives and a set of boiler tubes costing \$1,300, it is plain that the savings from this kind of investigative work totals an immense sum. But as a result the steel producers found their market for these pipes curtailed and had to seek new outlets. Science was highly successful in doubling the life of automobile tires. But the rubber companies have paid dearly for their earnest effort in this line of research.

The savings to the nation from chemical research are beyond computation. The invention of the dry air-blast for the manufacture of iron effected a reduction of nearly a dollar per ton in the cost of producing pig iron. The discovery of ways to produce and use chlorine in the treatment of drinking water is probably the greatest contribution to sanitation ever made. Three-fourths of the water used in American homes is now chlorine-treated. Research in the cement industry jumped the production of this essential product from 8,000,000 barrels in 1900 to 200,000,000 barrels at present.

Fifteen years ago it required a month to construct a single mile of concrete highway. Today we can build a third of a mile of concrete road in 10 hours.

A new antimony alloy useful in telephone



Science Has, Long Since, Made Obsolete, These Methods of Craftsmanship. It will do the same for many of the most modern industrial methods.



cable construction has saved the phone companies \$6,000,000 in less than a decade. Another alloy used in the relays and switches of telephone plants and central stations has effected a total saving of \$13,000,000 in seven years. Scientific investigation with cottonseed has resulted in the production of so many useful by-products that ten dollars have been added to the value of the cotton crop for every bale grown. Cottonseed and the oils and fats extracted from it are now contributing a half billion dollars to the national income of the United States. The chemist has added other tens of millions to our credit account by disclosing ways to manufacture more than a hundred useful commercial products from corn.

One might continue and tell of dozens of other results of research no less astonishing. The story of the creation and growth of the rayon industry contains facts that are almost unbelievable. The same thing is true with respect to research developments in the fields of coal tar, insecticides, luminous paints, adhesives, motor fuels, refrigeration, food preservation, light vibrations and electrochemistry. One may well inquire if this tremendous revolution in life and industry is to continue unabated. Will there be any lessening of the hazards that business must face in the years ahead from unexpected discoveries?

The answer is no. We now have more than a thousand industrial research laboratories in America employing over 16,000 scientists, and spending upward of \$120,000,000 each year for experimental work. In the fields of metallurgy alone there are 251 laboratories engaged mostly in the study of furnace practices and new alloys. We may be sure that the disclosures of new knowledge will be increasingly apparent and there will be no cessation of the forces now engaged in making and breaking industries.

A great cry has gone up for the stabilization of business. Unfortunately, this plea will be sounded in vain. There will be a continual upsetting of "normal" price relationships by a multitude of new inventions and chemical discoveries. Just as the automobile and the airplane forced a revolution in railroad rates and practices, so will synthetic rubber and scores of other new products bring about no less important upheavals. Price fixing can only be brought about by a monopoly, and even if this were not prevented by legislative restrictions, science itself would take a hand and nullify monopolistic action. In Japan there was a camphor monopoly; in Chile, one in nitrates; and in India, one in indigo. All of these found their power largely destroyed and prices cut as a result of the research of chemists in other lands.

Current developments in the manufacture of synthetic perfumes indicate the approach of the end of a profitable flower-growing industry in southern France. Here we will have an enactment of the same old drama. The ancient industry will decry the virtues of the new synthetic product. People for a time will be skeptical. But finally it will be disclosed that the perfumes made by chemists are even better than those made from the natural flowers. It took quite a while to get the public to recognize the truth that the best and fastest dyes known are the synthetic ones. It may take just as long to get the average citizen to understand that natural perfumes not only are limited in number, but they cannot be standardized for the reason that the odor of the flowers changes with the variety of the seasons and the uncertainty of the harvest.

On the other hand, synthetic perfumes are limitless in the number of new odors that can be produced. Their price will be much lower because the chemist can manufacture as much perfume in a small factory with a few vats and stills as can be secured under the old process from a large acreage of growing plants. While the flower-growers of France will find their livelihood disappearing, in other parts of the world we will witness the birth of a new business with a new art. The production of perfumes

with strange and fascinating odors will necessitate the development of a language to deal with these products. A new craft will arise entailing as much exercise of artistic genius in the blending of perfumes as is now required of the painter who specializes in the combination of delicate colors.

There is only disappointment ahead for people who believe we are approaching a business millennium in which we will see the end of ups and downs in our industrial life. Corporations can only go so far in their co-operative activities to make competition more intelligent and stabilize the price level. If the producer were the only party concerned, the remedy would be easy, but the consumer's interest is paramount and must be protected.

We may permit the wide publication of essential business facts and figures respecting markets and production, but we cannot dispense with laws that prohibit concerted action to bring about uniformity of policy among competitors. Furthermore, there are many forces at work causing price fluctuations that are beyond human control. In great major industries like textiles, coal and agriculture, even if it were possible to bring about concerted action by tens of thousands of producers, there would be no way to regulate such variable influences as those resulting from the weather. Consumption in dozens of lines will always vary with the mildness or severity of seasonal temperatures. A week of abnormal weather may destroy a crop. An insect invasion may result in such damage that the price of the product may be doubled.

The yearly losses of our farm crops caused by insects now total more than a billion dollars. The total annual damage to trees, humans and domestic animals from insect-borne diseases is estimated to be nearly half as much. It is amazing, but true, that if a pair of insects destructive to plants should increase for three years without hindrance there would be around 6,000,000 of the pests in existence.

The application of science to business is bringing about a continual betterment of practices. The adoption of standardization and simplification in manufacturing has effected a material decrease in production costs. The development and use of a uniform system of cost accounting by forward-looking corporations is promoting greater fairness in competition and assisting individual concerns to understand each other better when talking costs.

The problem of seasonal variation has also been handled successfully by modern managements in a wide range of industries. Greater speed in transportation, improvements in refrigeration and modern developments in scientific canning and cold-pack methods all have tended to stabilize prices of milk, vegetables, and fruits. Employment of workmen in the building trades has been increased from 75 per cent to better than 90 per cent of the entire year. The automobile has become a year-round necessity instead of a summer luxury, as a result of remedies having been found for the difficulties of winter usage. The export market has proved a valuable outlet for excess production. The purchase of American automobiles by foreigners the past year was equivalent to the sales in twenty states of this country.

But notwithstanding all we are doing, there is not the slightest indication of an approaching time of business stabilization.

There will be an end of price fluctuations and business upheavals when salesmen all die, invention ceases to function, new ideas disappear, science is buried, research is abandoned, competition gives way to monopolies, the purchasing value of the dollar remains constant, and human nature has been brought to abhor speculation. Science found the world of business in darkness and has succeeded in letting in the light. It has substituted truth for deceit and given a moral consciousness to what was a thing of shame. But while the rewards for merit are greater than ever before, the perils of business will continue to multiply.

Building Houses Fit for Heroes

How the Government and the Building Industry of Great Britain Has Kept the War Time Pledge to Provide Suitable Homes for its Veterans and Has Met the Housing Shortage

By HENRY R. ALDRIDGE,

Former Secretary of the British National Housing and Town Planning Council, Secretary of the Two International Housing Congresses, 1906 and 1920, and Author of "The National Housing Manual."



Burman Crescent, One of the Housing Projects in the Liverpool District Which Has Been Developed to Provide Suitable Homes for British Veterans of the Late War, in Accordance with Wartime Pledges. The houses in this group are all of concrete and every house must be provided with a modern bathroom.

THE British building industry is entitled to claim credit for a great achievement. The years since the close of the World war have covered a period of exceptional difficulty. Shortage of labor supplies, scarcity of building material, inflation of costs in practically every department of constructive work—all have conspired to place barriers in the way of the smooth working of a great industrial machine. For quite two years after the armistice, a boom for industrial expansion was responsible for a feverish activity in the unwise construction of new factories. Energy was also in demand for work on repairs which had fallen sadly in arrears between 1914 and 1918. It was not until the opening of the year 1920 that the building industry was set free to deal with the problem of constructing an adequate number of small houses to fight the housing famine from which the whole of Great Britain was suffering to a greater or lesser degree.

A Remarkable Achievement

According to figures published by the Ministry of Labor, the number of skilled operatives in the building industry of Great Britain was as follows in October, 1921:

Carpenters	132,260
Bricklayers	62,170
Masons	23,880

Slaters	5,370
Plasterers	17,080
Painters	115,900
Plumbers	35,840
Total	392,500

The membership of the operative class in the building industry is larger today, but it still falls short of the half million mark. Despite the fact that this building army is relatively small compared with that of the United States, it is possible for the leaders of the industry in Great Britain to take a legitimate pride in the fact that, in addition to all their other activities, which have been numerous and substantial, they have succeeded in building a million houses since November, 1918.

In round figures, this million houses may be divided into three classes of about a third of a million each. The first of these classes represents houses built under the housing schemes of British local authorities in response to an appeal made by King George V on April 11, 1914, that they should show in the active administration of the post-war Housing Act, the same untiring energy and enthusiasm as was shown in meeting the demand for munitions of war.

The second class represents small houses of the cottage



This Aerial View of Larkhill Estate Shows the Value of the Limitation of 12 Houses to the Acre Which Has Been Placed on All Housing Projects to Which the British Government Lends Its Aid. This group of homes is one of the Liverpool housing schemes.

type, built by small house builders and sold to working class purchasers, aided with substantial housing subsidies provided by the government.

The third class represents small villa property constructed for the tenancy of relatively well-to-do members of what in England is called "the lower middle class." The needs of many of the younger members of this class were urgent, so far as housing accommodation at the end of the war was concerned. It was not deemed necessary to provide any government subsidy, and the houses built for purchase by them were of the four and five bedroom type, with the usual parlors and living rooms. The sale price varied from \$3,500 to \$7,000, apart from road and land cost.

It will be seen from the foregoing figures that the actual contribution made towards the housing needs of the working classes has actually been about two-thirds of a million. It would be a mistake, however, to assume that the houses built for middle class occupation have not been of value of an indirect kind. As a matter of fact, many of the purchasers of the houses included in the third class, as defined above, had been compelled by the housing famine to crowd into working class homes, and the lessening of the tension of their need had a beneficial effect on the general housing problem.

The British View of the Housing Subsidy

The writer is sufficiently familiar with public opinion in the United States to realize that the American point of view concerning the desirability, or need for, government subsidies for housing is completely different to that held in Great Britain. To the extent to which this difference is due to the fact that standards of living and the capacity to buy, not only good housing accommodation, but good food and clothing and some measure of the amenities of life, are superior in the United States, the American people are entitled to claim that their methods of industrial organization and treatment of the life problems of workmen, render unnecessary the giving of state aid in any

form to fill in gaps in standards of life.

But, in justice to British housing reformers, two points must be made clear. The first is, that during the war, definite pledges were given to men called up to serve in a time of national "life and death" emergency, and the second is, that the fulfillment of these pledges as a matter of national honor could not be secured on so-called economic lines. So far as the second point is concerned, one clear statement will place the matter beyond dispute.

Quite half of the houses built since the war for the occupancy of the working classes have been built at a cost which, translated into terms of weekly rent, would have meant that from 30 to 40 per cent of the income of the tenants would have been absorbed in paying an economic rent. The position, therefore, was of choice between a callous disregard of the national pledges given during the war in order to avoid the burden of housing loss, or the fulfillment of housing duties with the aid of substantial subsidies.

The writer takes a pride in recalling the fact that the following pledge given in 1916, during the war, by the late Lord Long (then Mr. Walter Long) was made in response to a speech made by him in closing the case presented by a national deputation organized to demand vigorous housing action whenever the war closed.

In the closing sentence of the last speech, we were told that what had moved the speaker was not so much employment for the unemployed in the building trade, who would come back from the fighting, or for those who are here, but "the duty of the nation to provide that our soldiers, when they come to settle down, whether it be in the town or the country, shall, with the least possible delay, have provided for them decent home accommodation. It would indeed be a crime—a black crime—if, reading as we do the wonderful accounts of the sufferings which our heroes have to undergo in the trenches we sat still now and did nothing by way of preparation to insure that when these men come home they shall be provided with as little delay as possible. To let them come from

Houses Fit for Heroes

the horrible water-logged trenches to something little better than a pigsty here would be indeed criminal on the part of ourselves and would be a negation of all we have said during this war, that we can never repay these men for what they have done for us."

Other pledges given during the war included the famous one of the Prime Minister—Mr. Lloyd George—to the effect that it would be the duty of the state to take the necessary action to secure that when victory had been won, houses would be provided "fit for heroes to live in."

The Main Lines of Housing Finance

That the cost to the nation of this great effort has been considerable will be seen from the fact that grants of an annual kind, paid to local authorities in aid of municipal housing schemes, and annual subsidies to private persons, reached a total of \$42,000,000 in 1926. In the course of the next few years, this amount will become substantially greater because, although the amount of subsidy per house built after November, 1927, has been reduced in amount, the granting of subsidies will still be continued. It may be reduced still further, but as the present government will have to face the electorate in 1929, it is probable that they will not run the risk of popular condemnation. The fact is that both our Parliament and our people recognize that the housing subsidy has been the main factor in producing the two-thirds of a million houses which have been built for working class occupation, and which are now providing homes for upwards of three million people.

So far as the grants to private persons are concerned these have varied in volume under different acts of Parliament. But the most general type of subsidy has been that given by great local authorities, like Manchester, of lump sums of \$480. Towards this the state has contributed in the form of a promised annual grant, payable for 20 years, possessing a capitalized value of about \$360. All the work of handling the subsidy negotiations is left to the local authority of the area concerned and as a rule there is sufficient eagerness to encourage the purchase of houses



One of the New, Modern Tenements in Prince Edwin Street, Liverpool, Which Has Replaced Buildings Similar to Those Shown at the Bottom of This Page.

by prospective house owners belonging to the working classes to insure that the amount is added to by a contribution made out of the local rates of the district. Actually what happens is that on the strength of the promise of an annual grant from the government the local authority uses its borrowing powers and raises the capital sums needed to pay out the various lump sums promised to approved applicants.

The Letting of Houses to Municipal Tenants

There can be no doubt that the most valuable housing contribution from the point of view of national duty has been that rendered by local authorities under their own housing schemes. There has been some ground for criticism that many of those who were able to buy private enterprise subsidy houses, built by small house builders, belonged to the class of workmen included during the war in "sheltered trades" and kept at home earning good wages because they were of special value and importance as producers of munitions. By thrift they had succeeded in amassing substantial sums which were readily available for house purchase, and they could moreover afford to pay good prices. But these were not the men to whom the homes had been promised, and the whole nation looked to the local authorities to concentrate on the performance of the duty of providing "houses fit for heroes."

It is to their eternal credit that they have succeeded. Quite early in the history of these housing schemes all kinds of ambiguity in the terms of letting were swept away by the drafting of definite instructions (on the authority of full council meetings) for the guidance of the administrative committees. The Manchester City Council, for example, ordered its housing committee to deal with all applicants in the following order:

(1) Persons who have served in the war, who gave up their homes in Manchester to enlist, and are at present in lodgings.

(2) (a) Persons now living under serious conditions of overcrowding. (b) Persons who have served in the war and were not householders, but resided in Manchester prior to enlisting, and are at present in lodgings.



Perhaps the Most Important Phase of the Building Activity in England Since the War Has Been the Effort to Do Away with Such Slums as This, Many of Which Have Already Been Replaced by Buildings Like That Shown at the Top of This Page.



Houses of the Parlor Type Erected on the Wide, Arterial Road, Queens Drive, in Liverpool, England, Through Co-operation of the National and Local Governments.

(3) Others who have served in the war.

Only when the needs of these classes have been met are the housing committee of Manchester free to let their houses to other classes of applicants. This schedule of instructions may be taken as typical of those adopted throughout the length and breadth of Great Britain and the effect has been that nine-tenths of the houses built and let by local authorities are actually tenanted by those for whom they were built, by veterans of the war.

The Cost of Building the Houses

When the task of building these houses was entered on in 1920 the cost of a three bedroom house with a parlor, living room, scullery and bath not infrequently exceeded \$5,000, and, as a house of a similar kind could be built before the outbreak of war for about \$1,500, there was, by general agreement, a slowing down of the pace of production in order to give the building industry an opportunity to bring the figures to a more reasonable level. The measures taken to secure this end had taken effect by 1923 and from that year onward it has been possible to say that the building industry has "played the game" in a loyal way by building under contract for local authorities an increasing volume of admirable small houses at prices which are both reasonable and fair, when it is borne in mind that our "cost of living figures" represent an increase, as compared with pre-war years, of nearly 100 per cent in the cost of the necessities of life.

There have been, for example, during the past year, a large number of substantial contracts let under "sealed tender" methods of competition in which three bedroom houses with living room, scullery and bathroom are being built for less than \$2,000 each, exclusive of land and roads. Upwards of 95 per cent of the million houses, moreover, have been built by ordinary builders and contractors. The endeavor made to establish Building Guilds came to an unfortunate end in 1922 for reasons which there is no need to discuss here and, although there has been a certain amount of building by direct labor, the overwhelming volume of work has been done by ordinary builders and contractors working in the ordinary way.

Not the least difficult question which confronted local authorities in letting the houses thus provided, related to the question of the rents to be charged for their tenancy. It was finally decided that the local authorities should be empowered to charge rents within the means of working class families to pay. As this capacity varied according to the size of the town concerned, and was appreciably less in rural areas, the range of rents actually charged had little or no relation to the actual cost of building, which for various reasons has been almost as

great in rural areas as it has been in towns.

The following figures will be noted with interest. In many parts of rural England the rent charged for a parlor cottage is 5 shillings (\$1.20) a week plus rates. Throughout the industrial areas of the Midlands and the North of England, the rents of non-parlor houses, apart from municipal rates, range from 7 shillings (\$1.70) to 8 shillings 6 pence (\$2.05) per week. For parlor houses, the rents, apart from municipal rates, range from 8 shillings 6 pence (\$2.05) to 10 shillings 6 pence (\$2.50) per week. In London, however, the rents, apart from municipal rates, are 15 shillings (\$3.60) a week and more.

The Designs of the Houses

By the courtesy of the Liverpool City Council the writer is enabled to give an illustration of a typical group of the houses provided under one of several suburban schemes. In many ways these houses represent a great advance on the houses provided for the working classes in the years which preceded the war. This improvement has been quite deliberate. It was the desire of the nation that the houses built for returning soldiers should be better houses. Quality as well as volume of supply was emphatically demanded. This was admirably expressed by the King in 1919 in the course of a speech which ranks as an outstanding call to action:

"It is not merely 'houses' that are needed. The new houses must be also 'homes.' Can we not aim at securing to the working classes in their homes the comfort, leisure, brightness, and peace which we usually associate with the word 'home'? The sites of the houses must be carefully chosen and laid out, the houses themselves properly planned and equipped; and I would ask you not to overlook the supreme importance of the planning and equipment of houses to the women who will live in them, and whose convenience should therefore be a prime consideration."

Twelve to the Acre

The most striking of all achievements has been that secured by the limitation of the number of houses per acre to 12. A pledge to this effect was given by the war government in 1917. This pledge was redeemed in 1919 by Dr. Addison and has been loyally honored by his successors at the Ministry of Health—Mr. Neville Chamberlain and Mr. Wheatley. Under the 1924 Housing Act the last named Minister successfully passed through the House of Commons a provision that all municipal housing estates shall be governed by the limitation of 12 houses to the acre. This must not be departed from without the permission of the Minister of Health. The resultant value of this limitation can be gathered from the accompanying striking photograph, taken from an aeroplane, of one of the Liverpool housing schemes.

The Battle of the Bath

Another great achievement has been the inclusion of baths in such a large number of the houses as to justify the statement that 95 per cent of the million houses have baths, for the greater part in separate bathrooms. This amenity was not secured without a great battle between those who said that it was not desirable to incur this expense and those who said that no new house should be built without this necessity of a modern healthy family life. The reactionaries lost the battle and the universal experience is that the ample garden rendered possible by the 12 to the acre standard, the three bedrooms which

(Continued to page 102)

Effective Use of Expanded Steel in Concrete Reinforcing

NOTWITHSTANDING the fact that expanded metal has been a staple product in the list of construction materials for many years, there are still those who do not fully understand certain facts about it nor the wide range of its field of application. Although originally designed and perfected for the special use of the manufacturer of fences, safety guards and railings, in which field it is still used extensively, it is now used as reinforcing for concrete in many of its general as well as special forms.

The expanded metal used for concrete reinforcing is made from one of the highest grades of open hearth steel. The process of manufacturing it is a simple one, but one which is not known to many of the people who are familiar with the finished product. The plate is laid on the table of a press with one edge projecting over the edge of the table a distance equal to the width of the strand. A descending die-knife cuts and draws the projecting metal so that half-diamond shaped strands are formed at regular intervals along the length of the sheet.

The die is so shaped that the plate is left intact a short distance between successive strands while the middle of each strand is forced downward and the entire strand cold drawn to form the half-diamond. The plane of the half-diamond is approximately at right angles to the plane of the uncut plate.

The plate is then moved in the direction of its length. Simultaneously the plate is projected over the cutting edge a distance equal to the width of a strand. When the die next descends, the uncut portions of metal where the strands of the first half-diamonds are joined now become the bottoms of the loops forming the second row of half-diamonds. The die-knife returns to the original position and the third row of half-diamonds is formed, the strands being everywhere parallel to the first row and joined to the strands of the second row by successive uncut portions of metal.

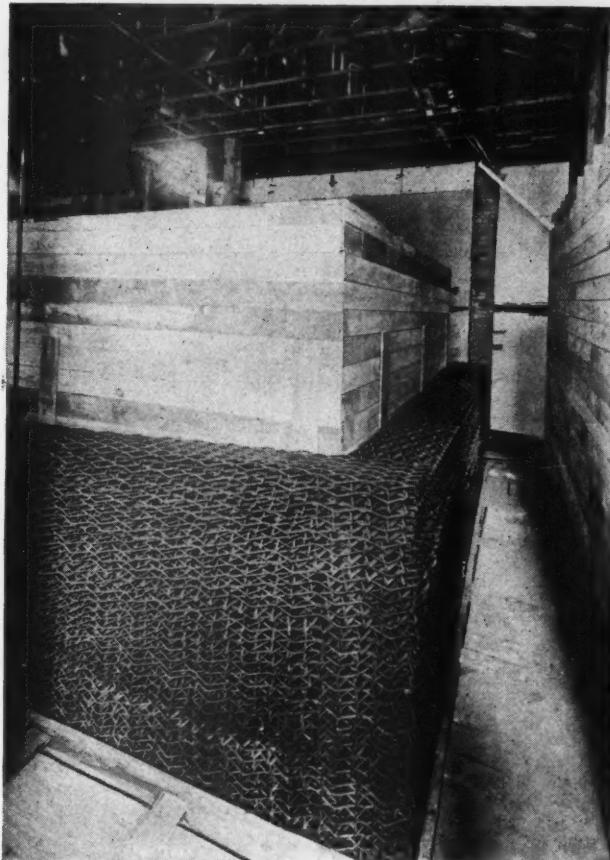


Fig. 1. One Type of Expanded Metal Reinforcing Used in the Concrete Walls of Large Bank Vaults.

central point and distributing it equally in all directions.

To the average contractor, builder or architect, the general uses of expanded metal for concrete reinforcing are well known. Among them might be mentioned floor construction, concrete roads, bridges, tanks, reservoirs and sewers. In these operations expanded metal offers an ideal method of reinforcing the concrete, as it approaches very closely to the theoretic amount of steel required per unit of surface, at the same time providing a piece of steel in a flat sheet, so fabricated that the bond between the steel and the concrete is perfect.

There are, however, several other uses which are worthy of attention and which have been found to be of practical value. For the past few years many safe deposit vaults in the principal banks of the country have been built with their concrete enclosures reinforced with expanded metal, which is in reality reinforcing against any possible type of attack, whether it be the bur-



Fig. 2. Another Type of Expanded Metal Reinforcing Used in Bank Vaults with the Mesh Placed Vertically.

This process is continued until the entire plate has passed under the dies and the complete piece has been finished. No additional operation is required to finish the sheet. To people who are building, from the owner and architect down to the man placing the steel in the forms, the use of expanded metal is an automatic assurance that they are using a material of selected quality steel, always to specifications, which is not, and cannot, be made from the ordinarily accepted stocks, as steel which does not meet these specifications would not permit of the cold expansion necessary in the process of manufacturing expanded metal.

The first and foremost prerequisite for reinforced concrete design is that the reinforcing shall act as a binder of the concrete and expanded metal performs that particular function with unusual thoroughness. Being of uniform area throughout, with each strand an integral part of the whole sheet, it acts as a steel mat in the concrete taking the load from any one

glar with his tools, the torch, and pneumatic hammer, explosive or the destruction of the entire building. Figs. 1 and 2 show different methods of vault reinforcing.

Fig. 1 is the type of reinforcing used in Federal Reserve Banks, and the larger banks of the country, in which the sheets of mesh in the walls are piled one upon the other so that the expanded metal forms a solid mat of steel embedded in the concrete. Fig. 2 shows another type of reinforcing in which the expanded metal is placed in a vertical position in the walls, making a very effective barrier against any form of attack. Fig. 4 shows a construction used for vaults, for fur storage and similar purposes in which also the mesh is placed vertically in the walls and floors and an additional sheet laid across this mesh with the whole mass of steel embedded in concrete. In each case the mesh employed is very heavy, weighing over $3\frac{1}{2}$

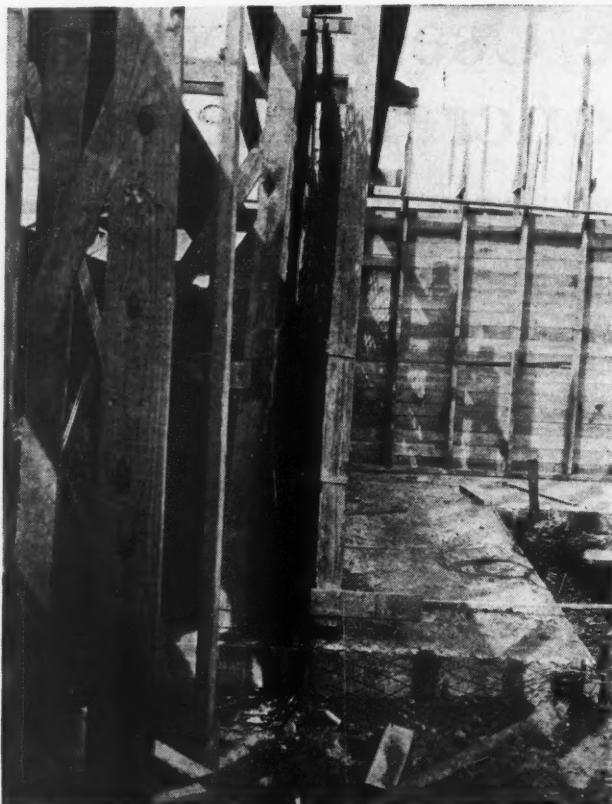


Fig. 3. Expanded Metal Has Proved Adaptable to the Reinforcing of Concrete Walls of Swimming Pools and Reservoirs.

pounds per square foot.

The adaptability of expanded metal to the reinforcing of walls for reservoirs or swimming pools, on account of its convenience in placing and the fact that the mesh remains in the position intended by the engineer once it is correctly placed, is shown in Figs. 3 and 5. This reinforcing material is also coming into favor for the reinforcing of stucco on buildings. This mesh has a smaller opening than some reinforcing mesh as used for concrete work, but is so designed that it holds the stucco with a strong bond and prevents cracks due to settlement or temperature changes.

Another very useful purpose to which expanded metal has been applied is the reinforcing of concrete fences, or walls, around industrial plants, recreation centers and large athletic fields. In walls constructed of concrete reinforced with expanded metal, light "H" columns are placed in a concrete base about 12

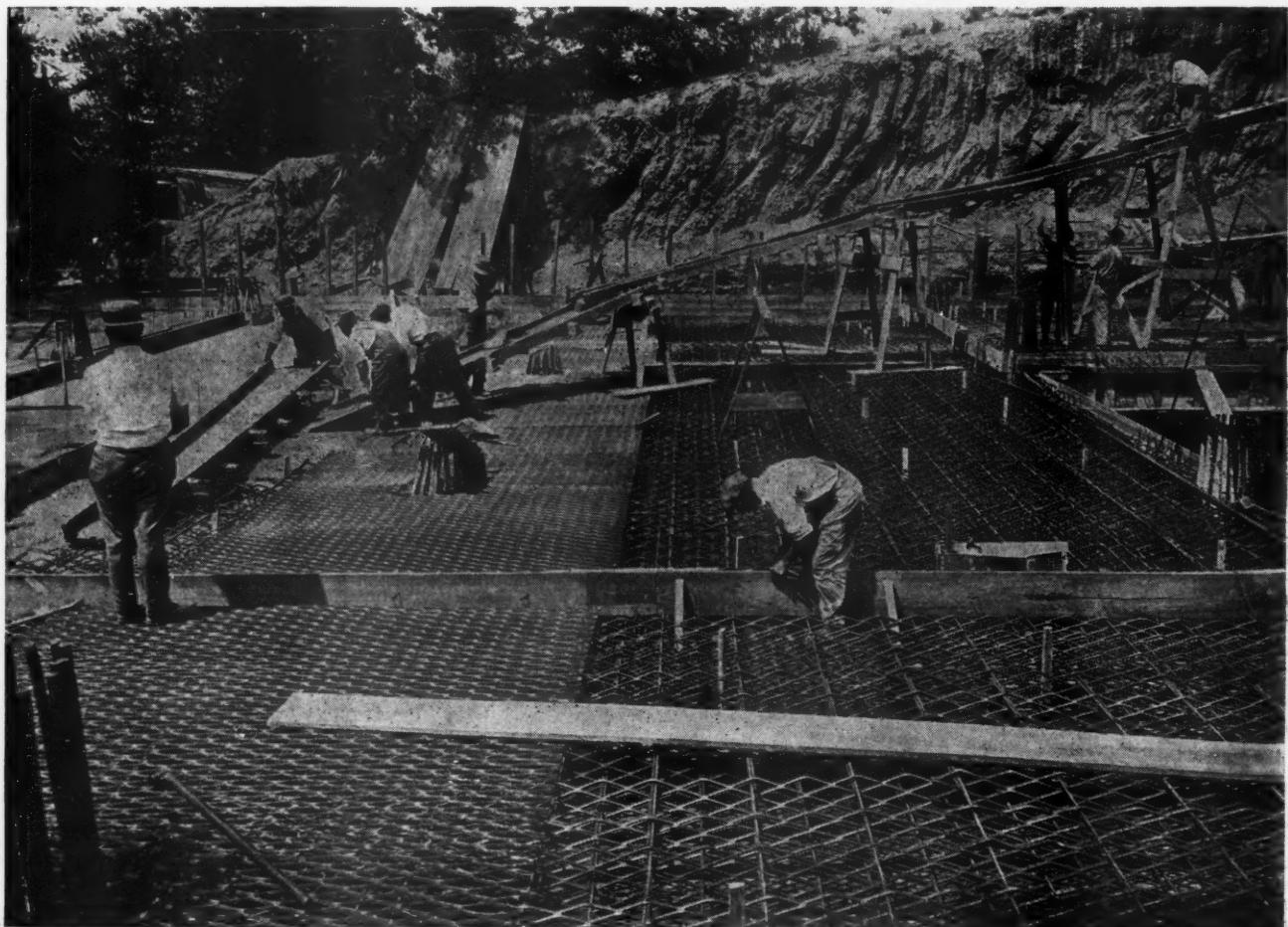


Fig. 4. This Type of Construction, with Expanded Steel Reinforcing in the Concrete, Is Used for Large Storage Vaults Such as Those in Which Furs Are Stored.

Concrete Reinforcing



Fig. 5. When Used for Pool and Reservoir Wall Reinforcement, Expanded Metal Is Found Convenient to Place and Remains in the Proper Position After It Has Been Correctly Placed.

feet on centers, as shown in Fig. 6, and between these columns, solid reinforced concrete slabs are placed with a light derrick.

These slabs may be precast on the ground and placed between the columns after setting or the mesh alone may

be placed between the columns and forms built up afterward. The columns are afterward enclosed with a form and concrete poured all around them and the top brought up to a point as shown. This wall will never require any attention on account of its strength and permanency. It is, at the same time, very attractive.

Garden furniture, made of concrete, also contains expanded metal to give it added strength and prevent cracks. Then, too, burial vaults are made of concrete with expanded metal as a strengthening factor. In these vaults the mesh is placed throughout as a means of reinforcing and also to prevent cracks which would cause the vault to lose its efficiency.

Fig. 7 shows a very useful application of expanded metal on highway repair work. Every motorist knows the reaction he receives when riding over a filled-in excavation along the road in which the replaced roadway has settled below the adjacent surface. Aside from this, the highway engineer will agree that such ruts are the forerunner of other disruptions to the adjacent surface and consequently cause increased repair bills.

To overcome this, the top section of the street is opened about 18 inches on each side of the excavation and when the repairs have been completed and the excavation filled in, a sheet of expanded metal is laid across the surface as shown in the illustration and the top layer of concrete finally poured. The expanded metal, in this case, provides a reinforcing for the top slab which will keep the surface of the street level and smooth despite the fact that the filled-in section beneath may have settled.

Many other effective uses of expanded metal in reinforcing concrete might be mentioned, including the floors of garages and porches of houses, pavements, sub-base for terrazzo floors, filter beds and all types of foundation work. In general, expanded metal will always prove a capable reinforcing in any concrete slab in which it may be placed.

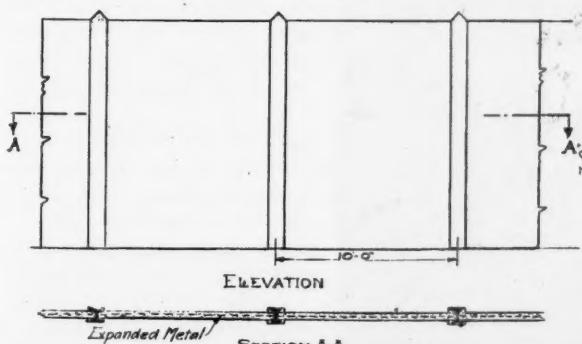


Fig. 6. Sketch Showing the Construction of Concrete Walls for Athletic Fields and Other Grounds with Light "H" Columns, Expanded Metal and Concrete.



Fig. 7. The Repair of Excavations in Highways by This Method, Using Expanded Metal, Avoids Settling of Fill-Ins.

Home Buying Through Monthly Bank Payments

A Simple and Safe Financing Method Proposed

By L. BRANDT
Housing Engineer

OWNING a home should be among the very first objects achieved in life. A home is a prized possession. It establishes standing and credit in the community. It is a mark of success, and can be handed down to future generations in the secure knowledge that it is a magnificent heritage. It is the place where children are born and reared, the hearthstone around which they will associate the glorious memories and recollections of their parents and their childhood days.

To assist and promote home ownership on the most prudent basis in a simple manner is the purpose of my "Certified Home Plan"—a complete financing plan for the purchaser so that after making a minimum down payment, all other payments to be made by the purchaser are combined in a fixed monthly amount, which he deposits with his local bank. This payment should include interest on first mortgage, interest and principal on secondary financing, fire insurance, taxes and a sinking fund for emergencies.

With a plan of this kind the purchaser can know and decide what monthly payment he can make. This in turn establishes the value of the house he can well afford to build or buy, and permits him to enter into the proposition with understanding and confidence.

The Certified Own a Home Plan

In the Certified Own a Home Plan, four interests are connected and co-ordinated. (1) The purchaser of the home, (2) the real estate operator who owns the land, (3) the local bank which handles all payments, (4) the loaning institution which supplies mortgage money.

Each principal performs his function as a part of the plan, and is fully protected and assured safety in his investment.

Particularly from the standpoint of the purchaser of the home, the Certified Own a Home Plan is the acme of simplicity. All of the many considerations to be taken into account in the purchase of a home have been so carefully worked out as to involve but one down payment at the time of purchase and one payment monthly thereafter to one source. All details concerning titles, mortgages, taxes, insurance, etc., are pooled and the purchaser has but one principal to deal with—the local depository.

The real estate operator who owns the land and builds the houses, deals with the purchaser, and a local bank or depository through which all monthly payments are cleared. On receipt of the purchaser's monthly payment, the depository distributes the installments so as to meet the necessary

payments on taxes, mortgages, insurance, etc., as they become due and payable.

The monthly payments involved in the Certified Own a Home Plan are the result of a carefully worked out arrangement to fit the rather complex and cumbersome home-buying methods of the past to the present national buying habits. The nation has been educated to make monthly payments. Rent, installments on automobiles, furniture, gas, electricity, household appliances are generally obtained on this basis. With the Certified Own a Home Plan, the home may be purchased under the same arrangement, everything involved being taken care of so that the family income need not be disturbed for semi-annual or annual withdrawals for taxes, interest, mortgages, insurance or other obligations.

In addition to the regular payments ordinarily required in the purchase of a home, the purchaser, under the Certified Own a Home Plan, builds up an equity in his home and at the same time lays aside an actual cash saving with the bank.

Besides the security and safety to the purchaser in the operation of this plan, the convenience of one down payment and succeeding monthly installments, there is no need for payment of fees for securing mortgage money which represents an appreciable saving on the initial purchase and financing.

Example

When a purchaser obtains a home under the Certified Own a Home Plan, he establishes his equity with a cash payment. This cash payment may be \$500.00, \$1,000.00 or \$1,500.00, according to the size and cost of the home. From that time on the plan provides for a combined monthly payment to a bank or a depository

to cover all the items of expense in owning and paying for a home. Ordinarily some of the items of expense in home owning calling for payments semi-annually or annually are sometimes lost sight of by the purchaser until they are actually due at which time he may not be prepared to meet them as he would on a monthly basis. In the Plan, the monthly payment is worked out to cover the following:

- A—Interest on first mortgage.
- B—Interest and principal on second mortgage,
- C—Fire insurance,
- D—Reserve for taxes,
- E—Savings account for emergencies.

It is impractical to show fixed monthly payments in this presentation as the amount of the monthly payment is



LEWIS BRANDT,
Housing Engineer, Pittsburgh, Pa.

controlled by local insurance and tax rates; however, the monthly payment in the purchase of a good substantial home may be \$50.00 to \$75.00 a month, and more or less according to the extent of the property purchased.

Evolution of the Certified Own a Home Plan

The Problems of the Purchaser

Keen competition between manufacturers of practically all necessities and luxuries of life has required them to so arrange the sale and purchase of their products that they may be readily purchased and easily paid for. The enterprising manufacturer takes advantage of every known factor of economic production in the making of his wares, employing the best minds obtainable. In addition, he generally arranges that his product may be purchased on terms which will be to the advantage of his customer, thereby overcoming sales resistance.

The manufacturer has approached the problem comprehensively as all problems should be approached, and he has solved it by eliminating, insofar as is humanly possible, the elements of speculation and guesswork. He knows before he begins to manufacture an article its probable future demand and the percentage of people who will most likely be interested in it. He knows exactly how its production, sale and ownership are going to be financed. The result is that the particular article is put on the market at a price and, because it may be easily purchased and paid for, without any question as to how long and how much will have to be paid, is easily and quickly sold.

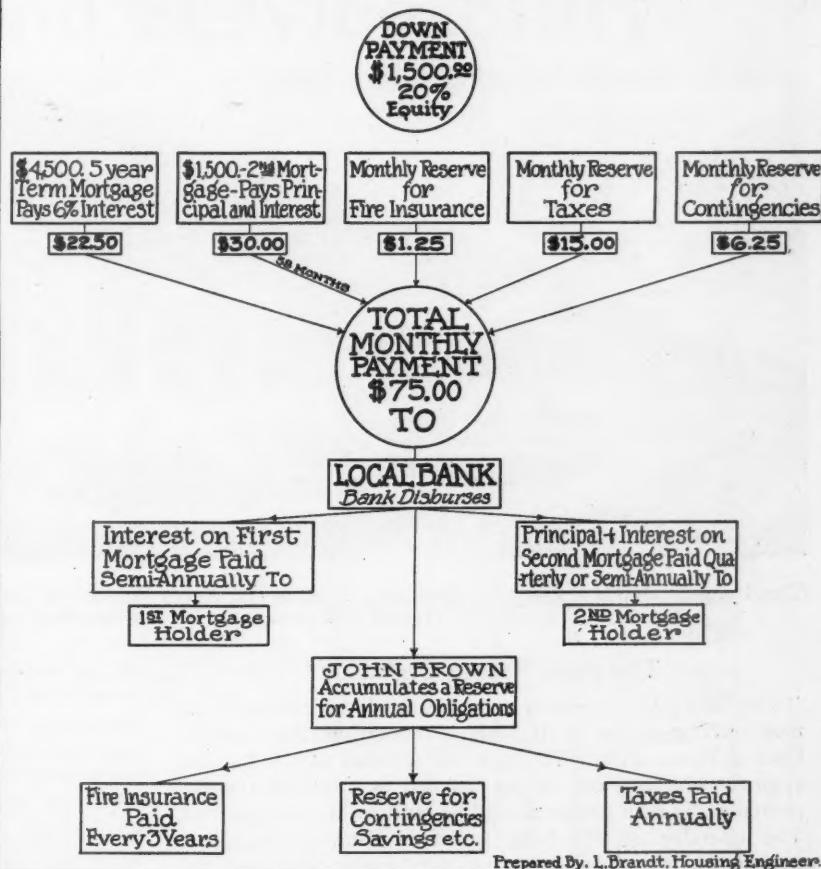
Home production and selling on the other hand, have not generally been approached with this thoroughness. Present methods involve so many details to be worked out, and so many complications that the prospective home owner is too often confused. The result is that most people do not feel like putting forth the effort necessary under present practices in home owning, to work out the details on an understandable basis, or to undertake a problem that prevents so many uncertainties and complications.

In working out this plan which simplifies building and owning of moderate cost homes, the various elements such as materials, labor, production, sales and financing have been gathered together, grouped and co-ordinated to the end that all uncertainties are eliminated. My Certified Own a Home Plan achieves what never before has been worked out or accomplished in the building industry.

Building Costs

It is not only the high cost of labor and materials that must be guarded against in home construction, but their waste which must be prevented. Land may be developed, utilities provided and houses built under well defined plans without due consideration being given to the ultimate cost factor. Due to custom and the established habit of years, when materials were plentiful and cheap, and labor costs low, many of the elements in final cost were lost sight of, and this has been the general rather than the exceptional case. This developed wasteful practices which are now receiving serious consideration in the work of housing associations, real estate organizations and loan institutions. These organizations while familiar with the problem, find

John Brown Buys a \$7,500.00 Certified Home-



This Chart Shows the Author's "Certified Plan" of Home Buying Through Monthly Payments to a Local Bank.

it difficult to solve since home building has been handled through so many different channels in effecting the complete home unit.

To meet these conditions satisfactorily, a co-ordinating service to develop plans and methods to handle the present complex and exasperating situation in financing, developing raw land, utilities and building problems is required.

During and since the World War, the cost of every element entering into home construction has increased. Improved building lots are scarce. The cost of developing building sites is high. Adequate financing is difficult to obtain since housing costs and sound values in many cases, are uncontrollable. This condition warrants the study of experienced and trained minds in its solution.

Simplicity of the Certified Own a Home Plan

The problem of home building, selling, owning and financing will not be vexing or burdensome, when, through intelligent guidance, the proper co-ordination of the various agencies now employed in the work, has been effected. This co-ordination, however, is vital in arranging a proper set-up, and is most effective when employed on a wholesale or quantity basis. In this work the housing engineer makes the necessary appraisals, cost analysis, financing program, building site, plans, building improvements, contracts and effects supervision.

The chart shown on this page presents in graphic form a comprehensive plan for home owning and financing, in which the elements are co-ordinated and worked out in such a manner that the home owner can know with reasonable certainty, just how he is coming out.



The Longest Building Used for Residence Purpose Is, According to the Builders, C. H. Harrison Co., of Ferndale, Mich., This Row of Houses in Pontiac. It is 1,296 feet long and was built in record time.

The Real Estate Operator

The real estate operator who has land to develop is the first interest to be dealt with in operating the Certified Own a Home Plan. Through the services of the housing engineer his property can be laid out to meet the requirements in the homes that should be built in his development. The operator should have sufficient working capital to finance the sub-division in the purchase of the land, the improvements of the streets, and the installation of utilities. He should have his lots clear of all encumbrances and established sufficient equity to secure commitments on first mortgages, and arrange with his local banking connections to function in the plan.

The First Mortgage

In applying for the first mortgage loans, the operator will present the housing engineer's cost analysis of the entire project which sets forth the sales prices, the cost of improved lots, and the cost of building the houses. The complete financial set-up proposed places construction on a cash basis so that the loaning institution is given full and definite information upon which they can make commitments.

The Bank

The local bank becomes, as it should, a very vital and important agency in the plan since the bank becomes the depository through which all payments are cleared.

The bank is an important factor at the beginning of the undertaking since it is consulted with reference to the advisability of carrying out the development and the part it may take in building and home owning in its community by acting as the bank for all interests. The local bank by functioning in the Certified Own a Home Plan, has a banking interest since it brings business to it and they have the accumulation of money collected for a period of time which in some respects has decided advantages over the average domestic account.

The Purchaser

The Plan will encourage and promote home ownership since the operator can establish a sales policy at the begin-

ning of his development offering purchasers safe and liberal terms with a minimum down payment. The monthly payment then completes the financing of the home for the purchaser, all his payments thereafter in owning and paying for a home being combined.

The monthly payment which covers all the expenses in buying and paying for a home safeguards all interests, especially the home purchaser since it puts him in position to understand the undertaking. From a monthly payment standpoint he can make his decision more securely than on the basis of total home cost as many people overburden themselves in the purchase of the home through a misunderstanding of total expenses involved.



The Portland Cement Association, 33 West Grand Ave., Chicago, has published a sheet of "Specifications for Making, Placing and Curing Concrete in Cold Weather," which is described as "Supplementary to the regular concrete specifications and to be added thereto," and which, if backed up with intelligent inspection, will give satisfactory work.



The Longest Residence

THE C. H. HARRISON CO., of Ferndale, Mich., builders of the row of houses illustrated here, states that this building which it has erected in Pontiac, Mich., is evidently the longest building used for residence purposes in the world and that it was also erected in the shortest length of time. At least it is certain that it measures up very close to both of these records.

The building was started on September 22, and there were families living in it just 40 working days later and the entire project of 72 units in the first building, together with 31 units in the second building, was completed and ready for occupancy on December 15, making a total of 65 working days after deducting Sundays and days when the men were unable to work because of weather conditions.

The length of the completed building is 1,296 feet and it contains, in all, 103 residential units which the owners have been most successful in renting.

Demonstrating the Finest in Beauty and Serviceability

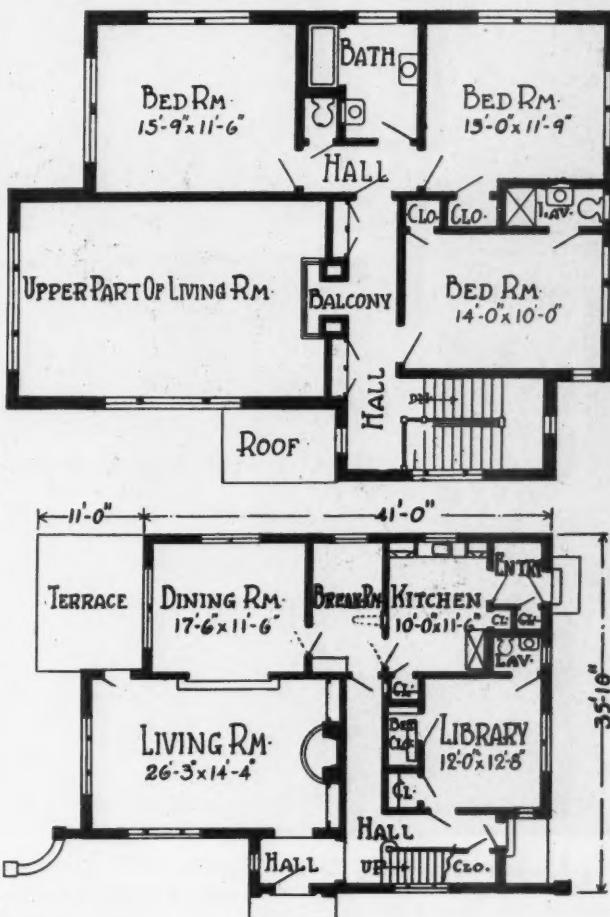
THE Beaumont Ideal Home represents the combined efforts of the Beaumont, Texas, building interests to demonstrate to the people of their city the very finest, in beauty and serviceability, in home construction. It was the culmination of a series of homes undertaken by the Beaumont Building Material Company in fostering the better homes movement and was sponsored by the Beaumont Enterprise and Journal with architects, contractors, material dealers and merchants co-operating.

The house which was the result of this undertaking, and which is pictured on this page, represents the best in design, materials, construction, decoration and furnishing, from foundations to roof. In it a particular effort was made to demonstrate what can be accomplished with fireproof construction materials in which the Beaumont Building Material Company specializes.

Foundations are of solid, reinforced beam construction on concrete piling every six feet, giving a positive assurance against wall cracks and settling. The solid concrete sub-floors are overlaid with two inches of water-proof material on which the hardwood floors are laid, guaranteeing non-warping doors and non-squeaking floors. The tile, used in flooring the living room, bathrooms and kitchen, was selected and laid by experts from the factory and all other floors are of quarter-sawed red oak.

The basement, 24 by 22 feet, was designed primarily to house the steam heating plant, but is sufficiently large so that it may also be used for storage. Walls and floors are waterproofed with several layers of an asbestos felt and hot asphalt water-proofing material and in addition a waterproofing compound was used integrally in the concrete. This assures an absolutely water-tight room and the floors above the basement are built of reinforced concrete to minimize the fire hazard.

Outside walls are built of an interlocking, hollow tile which affords a high degree of insulation against cold in winter and heat in summer. They are faced with a face



One Feature of the Plan Is a Two-Story Living Room with a Fascinating Balcony Over the Fireplace.



The Tall Window, Extending from First to Second Floor, Is an Impressive Part of the Front Elevation of This Beautiful Home. In it Belgian glass of varying colors was used most effectively and this is typical of all of the details of the Beaumont (Texas) Ideal Home.

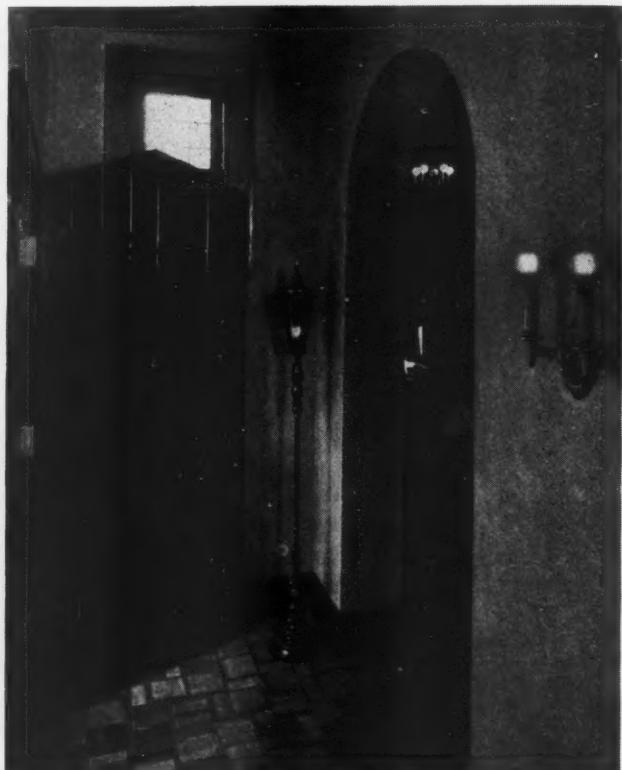


The Spacious Two-Story Living Room with Its Balcony Above the Fireplace, Heavily Beamed Ceiling, Beautiful Tile Floor and Low Steps Leading Up to the Dining Room at the Right.

brick known as smoked rug while the roof is of selected asbestos shingles of a darker color than the brick, but blending with it and shaded to a dark brown or umber tone. This roofing material was selected without regard to price on the basis of its high rating by the underwriters and its beauty and adaptability to the style of the house.

The architectural treatment, by Livesay and Wiedemann, Architects, of Beaumont, is Italian in style. Since Italian architecture is best reproduced by light variegated colors of either stone or stucco, a brick was selected for the facing which most closely approached this scheme.

Passing to the interior, it will be noted that the waterproofing composition used over all sub-floors not only excludes all dampness, but is also fire and vermin proof and acts as an insulation



Even in the Entrance No Detail Has Been Overlooked in Making the House Artistically Complete.

against noise. Very little sound is produced in walking over any of the floors. The tile flooring of the living room is all handmade and after it had been laid the man in charge of the job defied anyone to find two tiles that were exactly alike. It was said that this was the most elaborate pattern ever turned out by the factory making this tile. The colors in all the tile floors are absolutely permanent. In the main bathroom the floor tiles are of a dark blue with a baby blue on the side walls and white overhead. In the other bathrooms pink tones with white overhead are used. All of the bathroom fixtures are of the built-in type and include shower baths in both bathrooms.

The interiors of all rooms are plastered over metal lath and finished with a plastic material which permits practically any texture and color that the decorator may con-

Beaumont's Ideal Home

ceive. In the living room this has been used to obtain a reproduction of the water-soaked and stained walls of those century old buildings for which Italy is renowned. This spacious room is two stories in height with a fascinating balcony above the fireplace and heavily beamed ceiling. The floor is covered with random tile and all doorways are arched.

From this living room there are two steps up into the adjoining room, the furnishings of which, by a local merchant, are one of the most striking features of the house. All of this dining room furniture is hand carved from solid walnut in an exact duplication of the furniture of the sixteenth century, Italian Renaissance. At one side of the dining room is a terrace, sheltered from the street by the projection of the living room, while at the other side is a



Bathrooms Completely Tiled and Equipped Are Found Above Stairs with Dark Blue Floor, Baby Blue Walls and White Ceiling in This One.

breakfast nook forming, also, a passage from the kitchen.

On the first floor, too, there is a library with a bed closet and lavatory which make it readily available as an extra bedroom when required. From an interior hallway stairs ascend to the second floor and over these stairs there is a long window extending the full height of the two stories. Belgian glass of varying colors was used in this window and the color scheme is a work of art, a striking and impressive feature of the home.

On the second floor there are three bedrooms and two bathrooms. The same perfection of finish, decoration and furniture, seen on the lower floor, are carried out in these upper rooms and the large master bedroom overlooks a beautiful garden linking up with the perfectly appointed garage

A Glimpse of the Dining Room from the Living Room Shows the Charming Effect of the Approaching Steps Leading Up to a Doorway of Irreproachable Design.

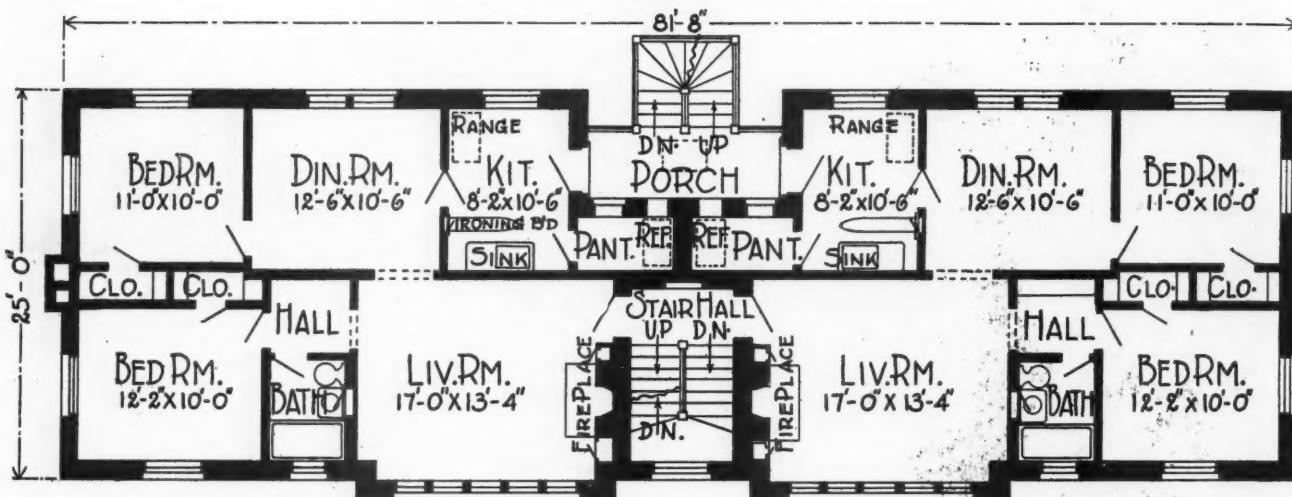
and servants' quarters at the rear of the lot. All of the numerous closets are cedar lined to protect the contents against the invasion of moths. There are radio plugs provided in certain of the rooms and built-in niches for telephones, while an electric refrigerator in the kitchen assures a constant supply of ice and perfect preservation of foods.

One interesting item which illustrates the very complete equipment of this house is the master key system used. One master key will unlock every door, inside and out.



The Ceiling Fans Seen in Nearly Every Room Are a Feature Particularly Appropriate to a Complete Home in This Texas City Where the Summers Are Long and Warm.

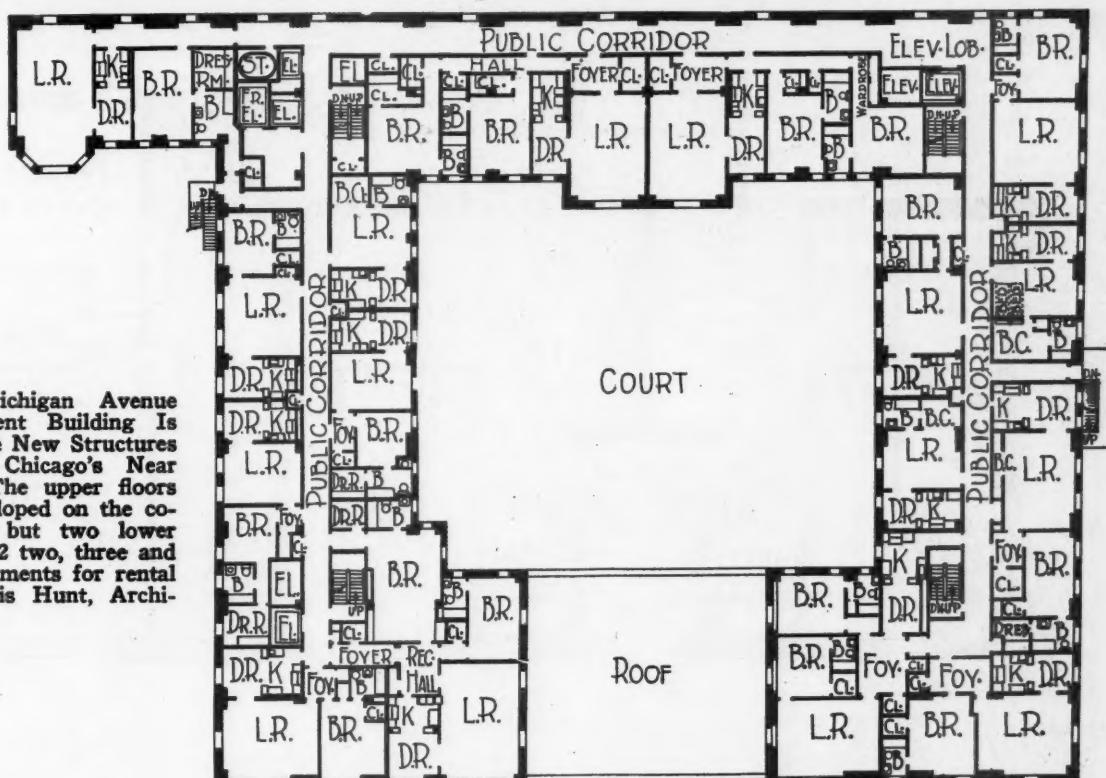
APARTMENT HOMES

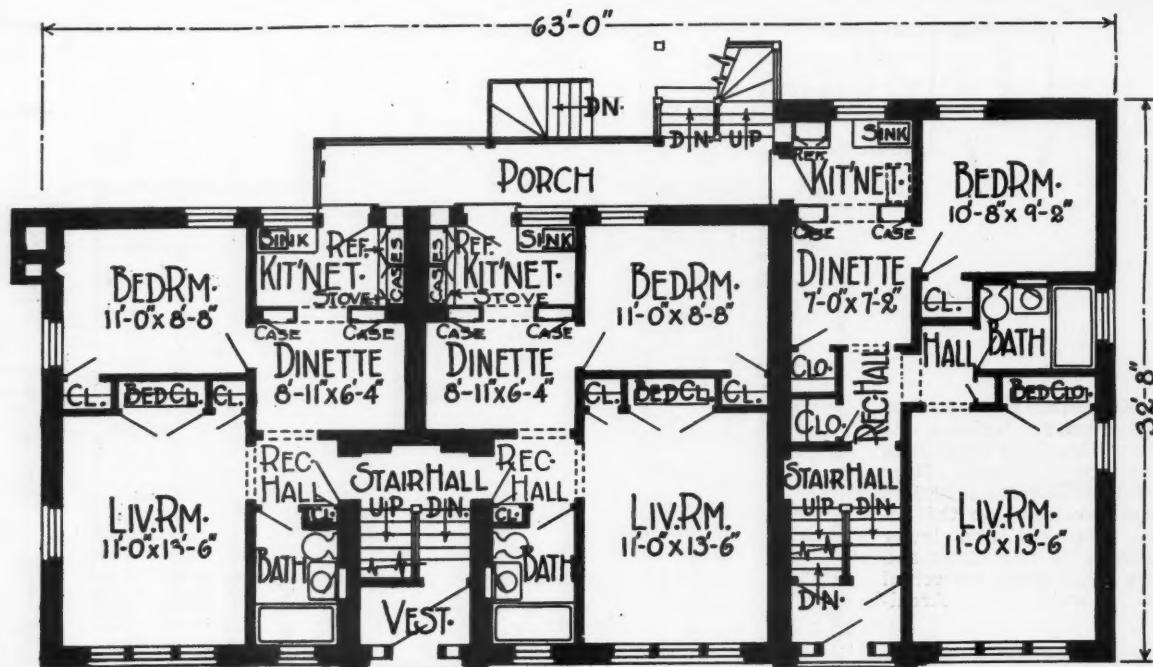


These Five-Room Apartments Are Exceptionally Well Planned to Provide Attractive and Comfortable Homes. They are compact but roomy, and are light and airy with cross ventilation in all bedrooms. They boast that highly desirable feature, so rare in apartments, a fireplace in the living room.



For the Wide, Shallow Lot, a Building Such as This One, Which Was Designed by Bernard L. Roos, Architect, of Chicago, Is an Excellent Type of Improvement. Though Simple of Exterior, It Is Attractive in Appearance and Provides a Group of Highly Desirable Homes.





Another Apartment Building Suitable for the Development of a Wide Shallow Lot Is This Three-Story Building
Designed by Bernard L. Roos, Architect, Chicago. Each floor contains three compact dwellings, providing living room,
bedroom, bath, dinette and kitchenette.

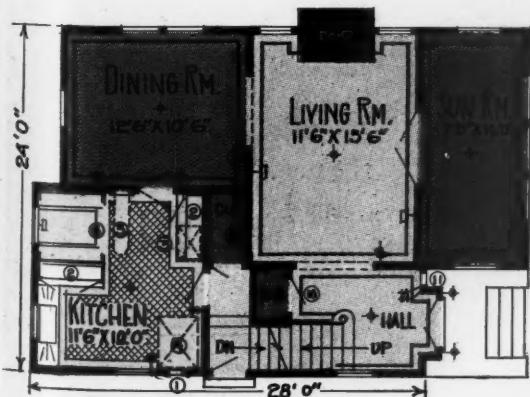


The FALLSTON

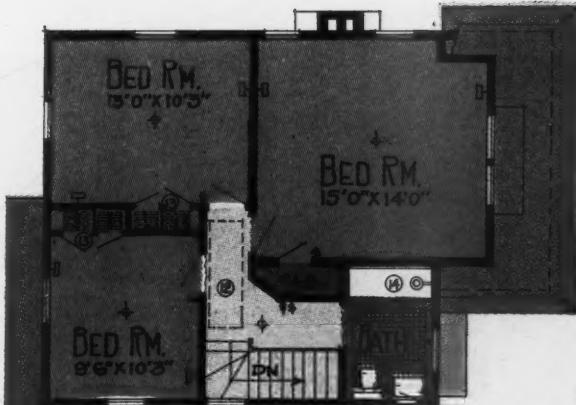
A PERMANENT home on a narrow lot containing six rooms and bath besides the big solarium. This home is designed for a maximum of light and cheerfulness.

COLOR KEY TO PLANS

LIVING ROOM	CLOSET
DINING ROOM	BED ROOM
KITCHEN	BATH AND LAV.
PANTRY	PORCH
HALLS	ROOF



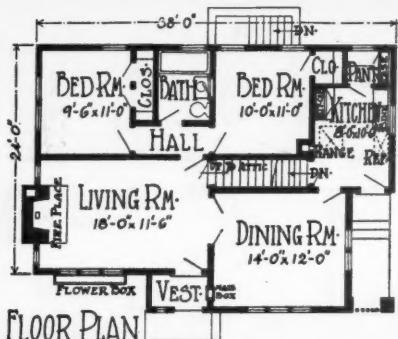
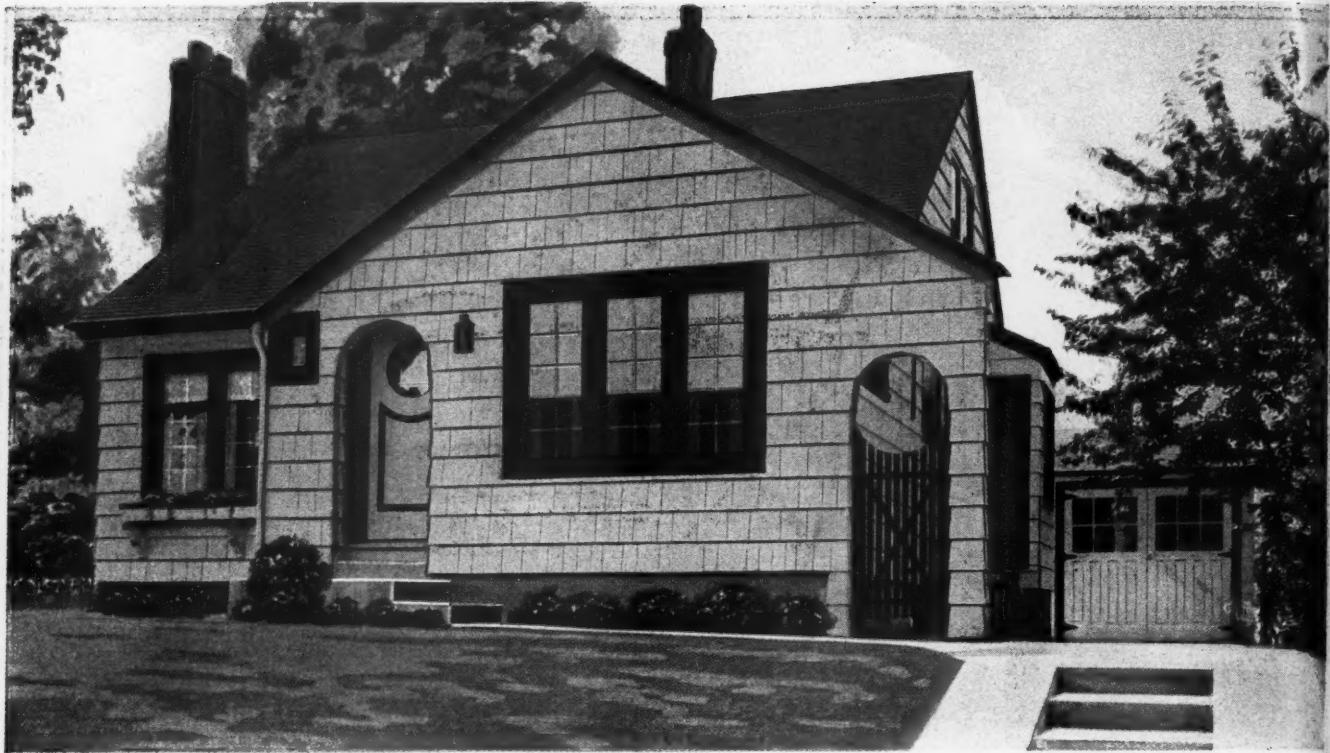
FIRST FLOOR



SECOND FLOOR

Key to Equipment

① Ventilating Fan	⑫ Disappearing Stair
② Kitchen Cabinets	⑬ Space-Saving Closets
③ Refrigerator	⑭ Tub Shower
④ Range	Weatherstrips
⑤ Ironing Board	Storm Sash
⑥ Breakfast Nook	Screens
⑦ Thermostat	Lighting Fixtures
⑧ Broom Closet	Convenience Outlets
⑨ Fireplace Throat and Damper	Electric Panel
⑩ Mirror Door	
⑪ Built-in Mail Box	
	Washing Machine
	Clothes Drier
	Coal Chute
	Heating Plant
	Hot Water Supply
	Water Softener
	Garbage
	Incinerator
	Radiant Gas
	Heaters
	Casement Windows

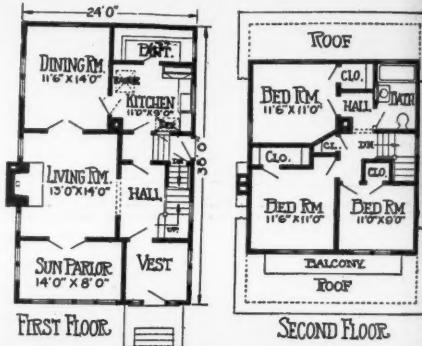


The GILEAD

Above and to the left is a delightful five-room house, small and inexpensive but making a delightful home.

The GILTEDGE

Below and to the right is a most popular six-room home, really seven rooms counting the sun parlor. This layout, 24 x 38 feet, goes on a narrow lot and makes a very satisfactory home.



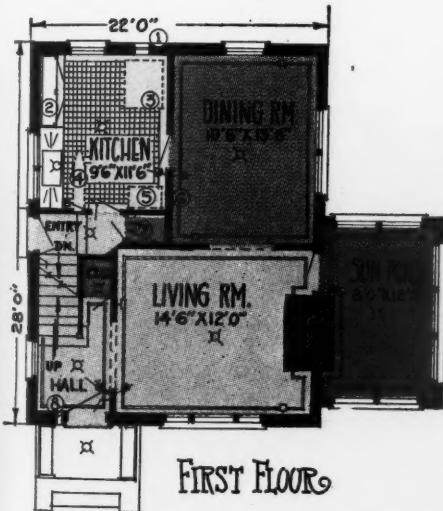
SECOND FLOOR





The FLETCHER

A POPULAR design for close-in city construction is the six-room brick home pictured above. Where space permits the sun room addition is worth all that it costs. Such a home can be made very attractive.



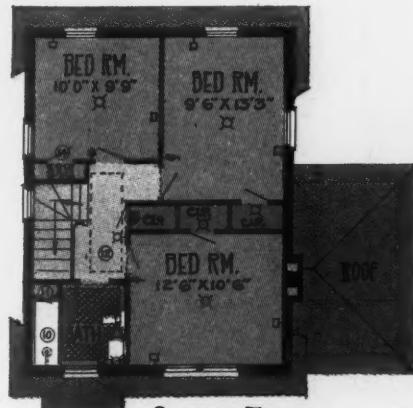
FIRST FLOOR

Weatherstrips
Storm Sash
Screens
Lighting Fixtures
Convenience
Outlets
Electric Panel
Washing Machine
Clothes Drier
Coal Chute

Heating Plant
Hot Water Supply
Water Softener
Garbage
Incinerator
Radiant Gas Heaters
Casing
Windows

COLOR KEY TO PLANS

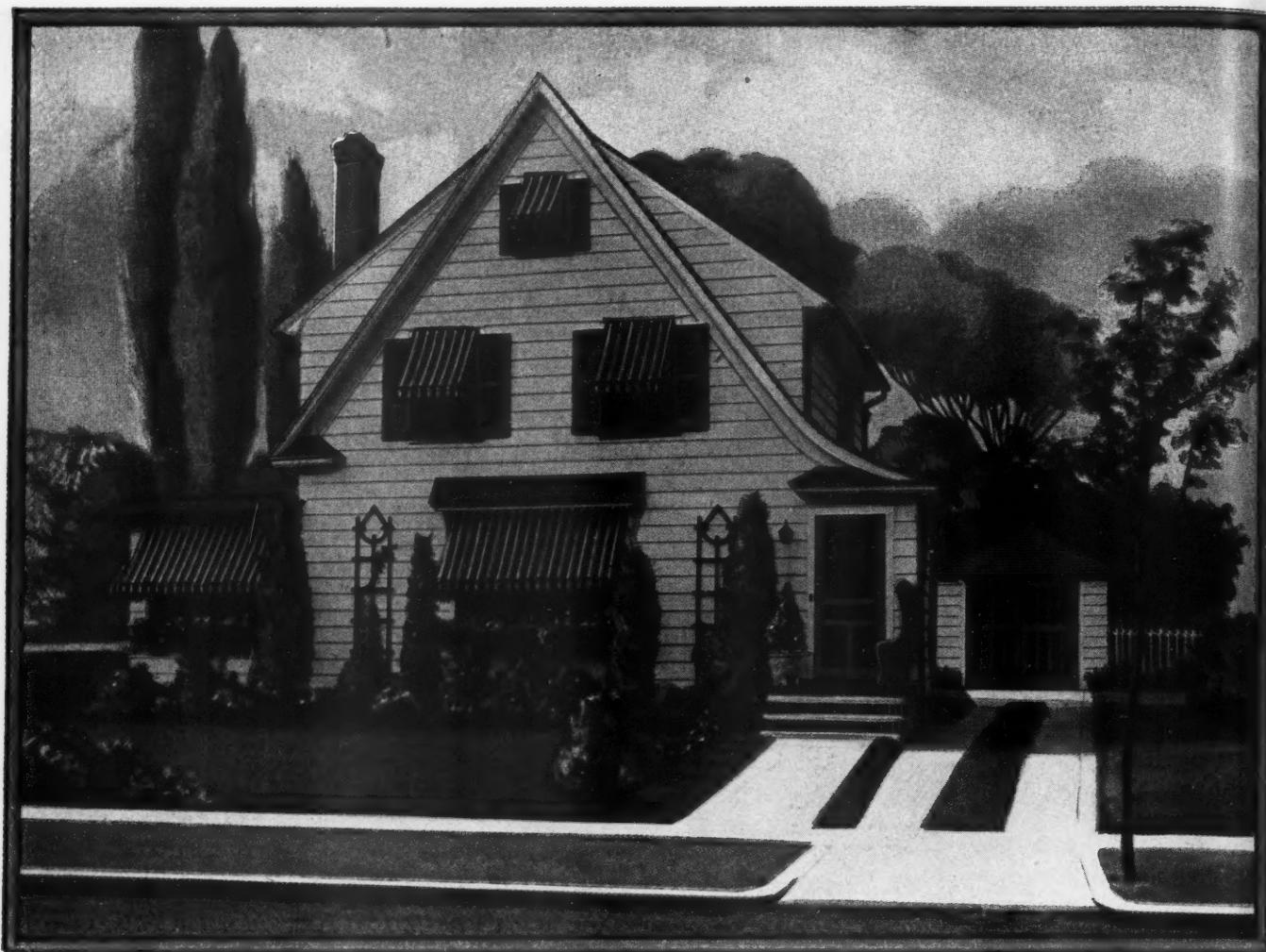
LIVING ROOM	BED ROOM
DINING ROOM	BATH AND LAVATORY
KITCHEN	PORCH
PANTRY	ROOF
HALLS	
CLOSET	



SECOND FLOOR

Key to Equipment

- ① Ventilating Fan
- ② Kitchen Cabinet
- ③ Range
- ④ Ironing Board
- ⑤ Refrigerator
- ⑥ Thermostat
- ⑦ Broom Closet
- ⑧ Built-in Mail Box
- ⑨ Fireplace Throat and Damper
- ⑩ Tub Shower
- ⑪ Linen Case
- ⑫ Disappearing Stair
- ⑬ Moth-proof Closet

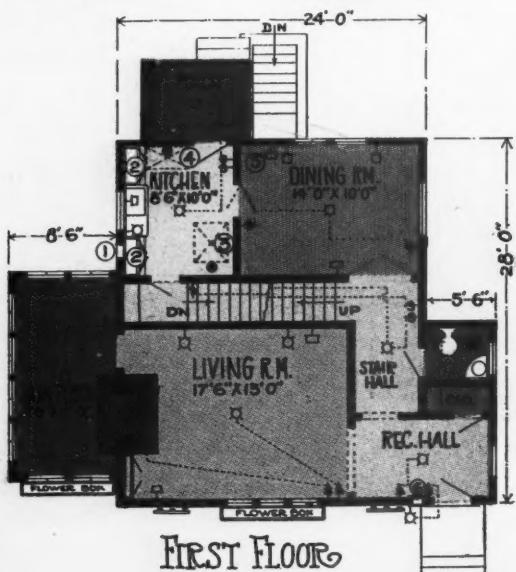


The FREDERICK

HERE is a very artistic home of six rooms, bath and sun porch. The reception hall, stair hall and adjoining lavatory are a special feature of this design. These ColorKeeD Plans deserve close study for the wiring and equipment suggestions they present.

COLOR KEY TO PLANS

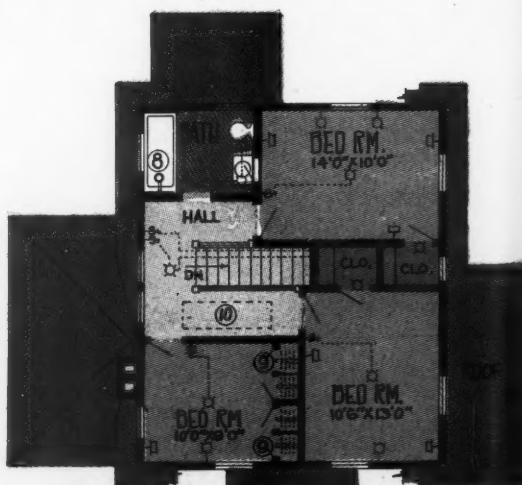
LIVING ROOM	CLOSET
DINING ROOM	BED ROOM
KITCHEN	BATH AND LAVATORY
PANTRY	PORCH
HALLS	ROOF



FIRST FLOOR

Key to Equipment

- ① Ventilating Fan
- ② Kitchen Cabinets
- ③ Range
- ④ Refrigerator
- ⑤ Thermostat
- ⑥ Built-in Mail Box
- ⑦ Fireplace Throat and Damper
- ⑧ Tub Shower
- ⑨ Efficiency Wardrobe
- ⑩ Disappearing Stair



SECOND FLOOR

Weatherstrips
Storm Sash
Screens
Lighting Fixtures
Convenience
Outlets

Electric Panel
Washing Machine
Clothes Drier
Coal Chute

Heating Plant
Hot Water Supply
Water Softener
Garbage
Incinerator
Radiant Gas Heaters
Casement Windows

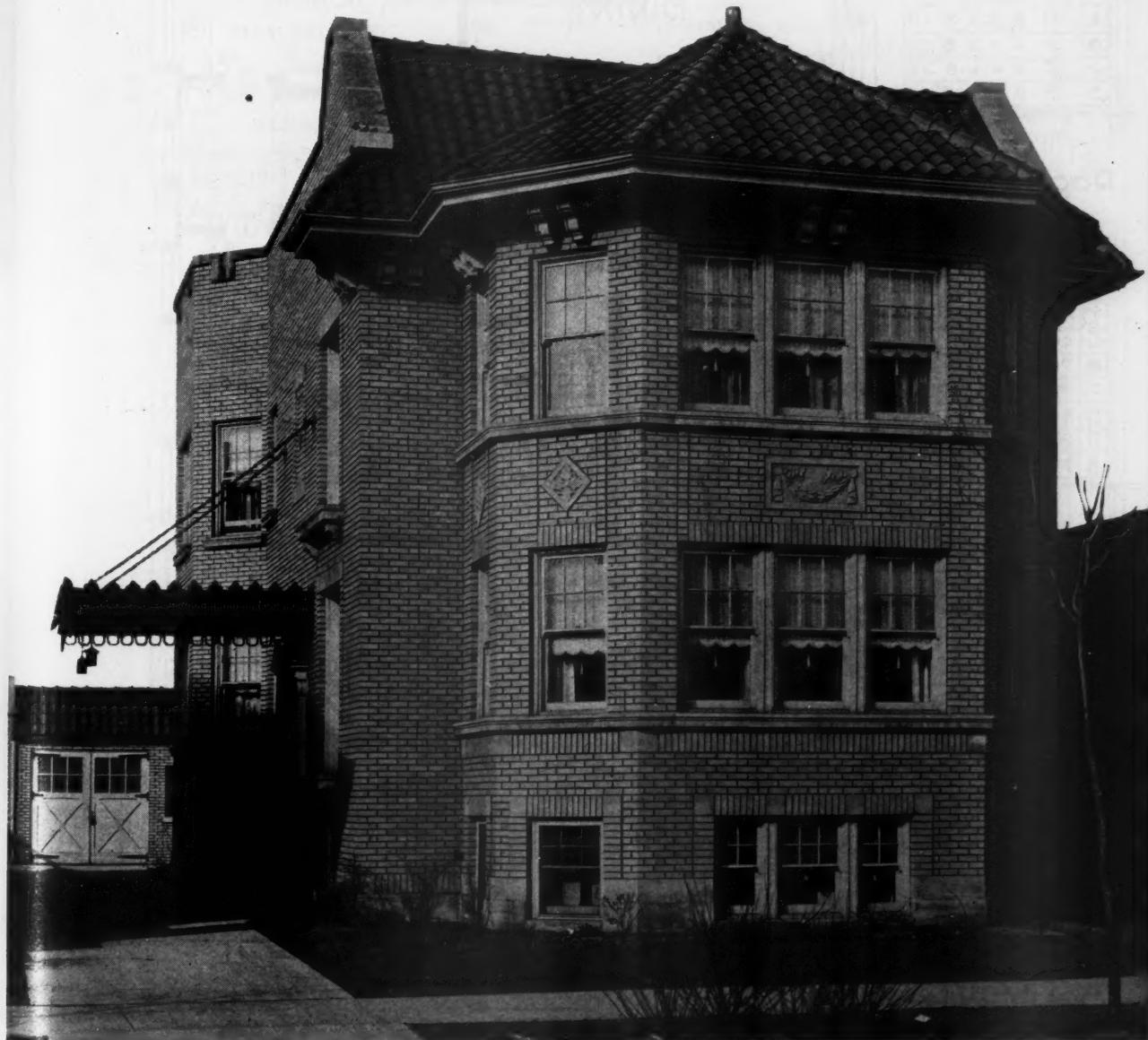
OUR FRONT COVER HOME



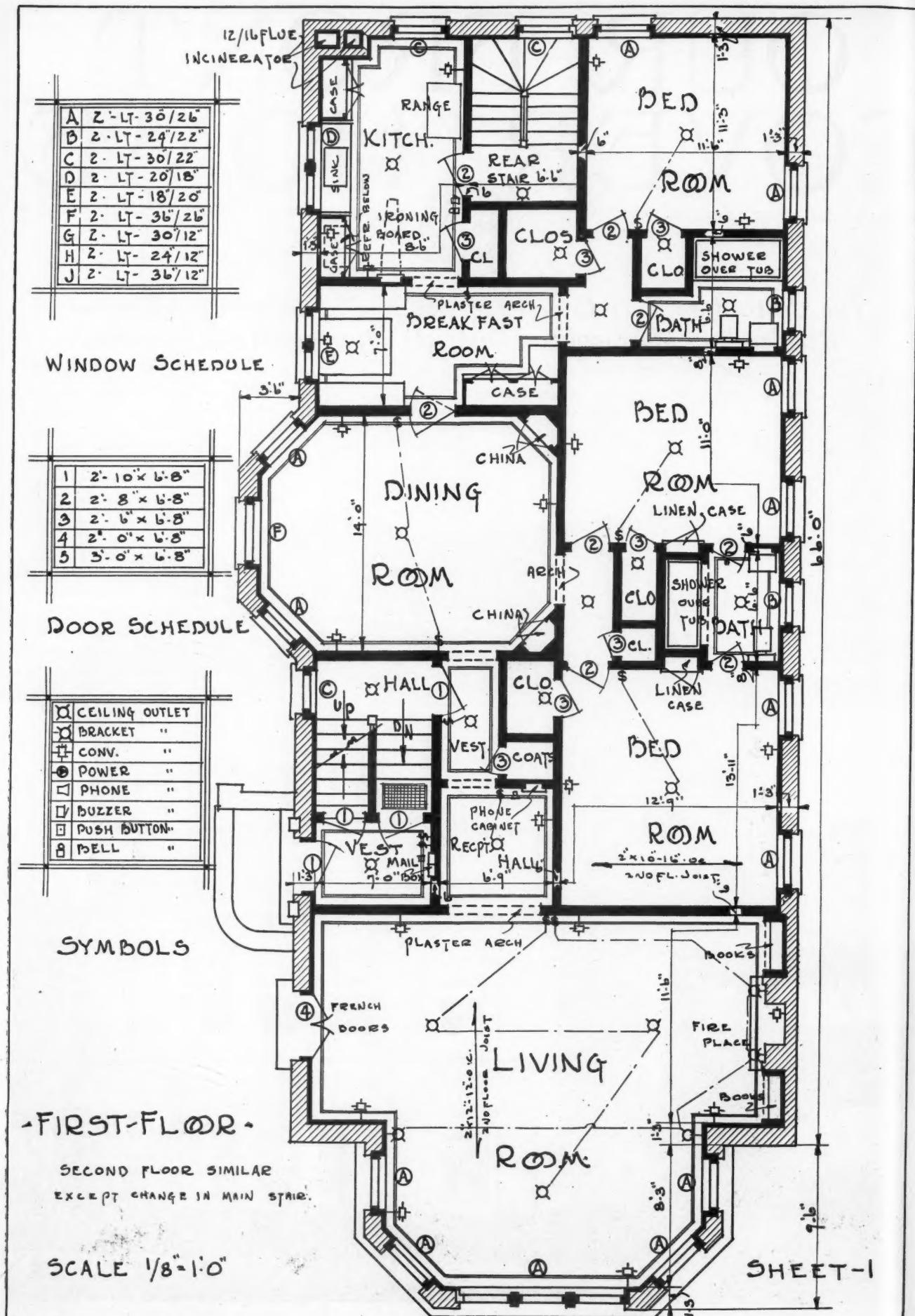
The Up-to-date Two Apartment Building is a Preferred Type of Residence in Metropolitan Districts Throughout the Country

THE truly modern type of two apartment building, such as the one selected for Our Front Cover Home, offers the tenant a real home with almost every feature to be had in the single family residence and certain conveniences not available in a house. That this is actually

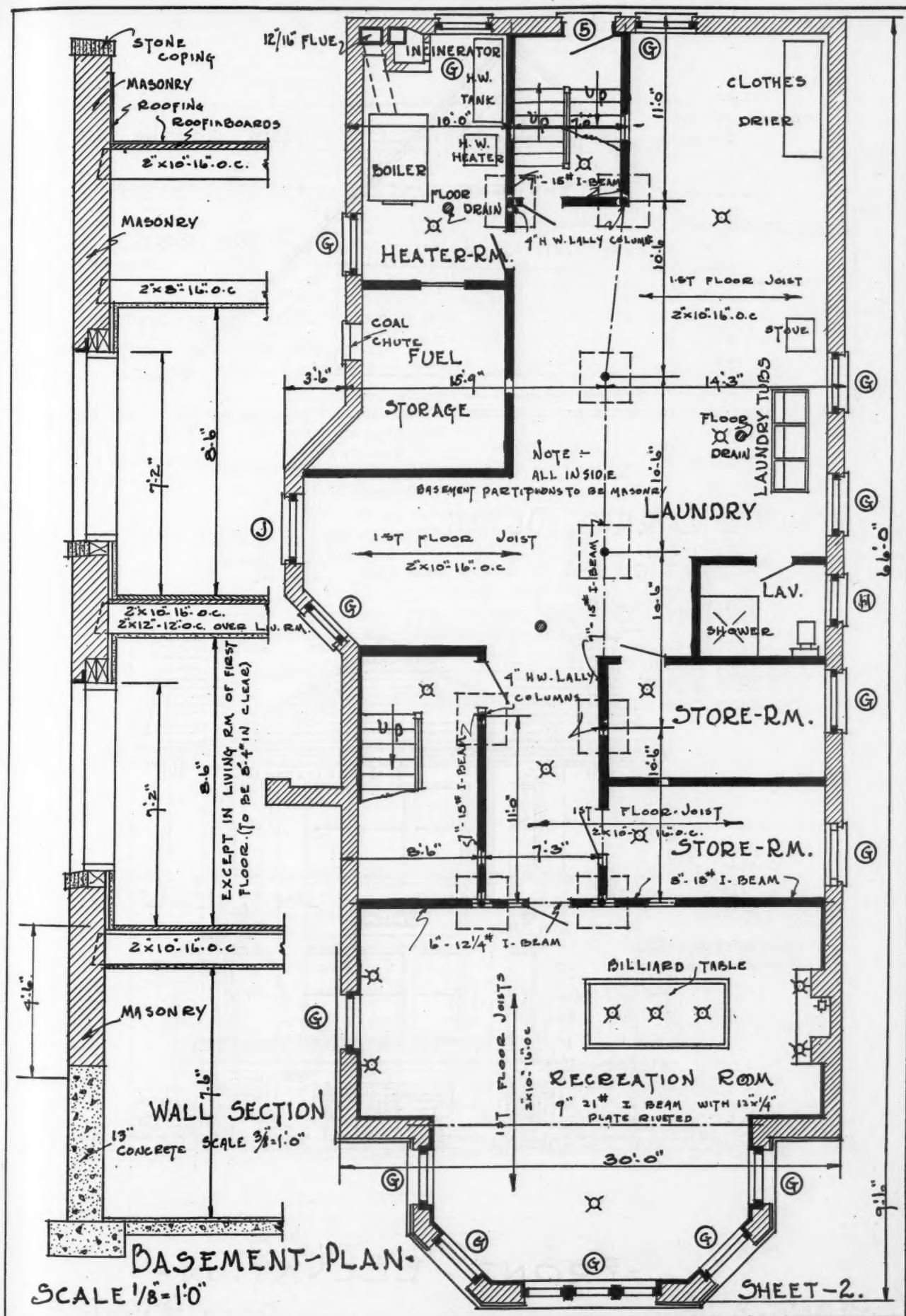
so may be seen by reference to the four pages following this on which are reproduced, to scale, complete working plans for this building. The second floor plan is not shown, but is the same as that for the first floor except for the necessary change to accommodate the main stairway.



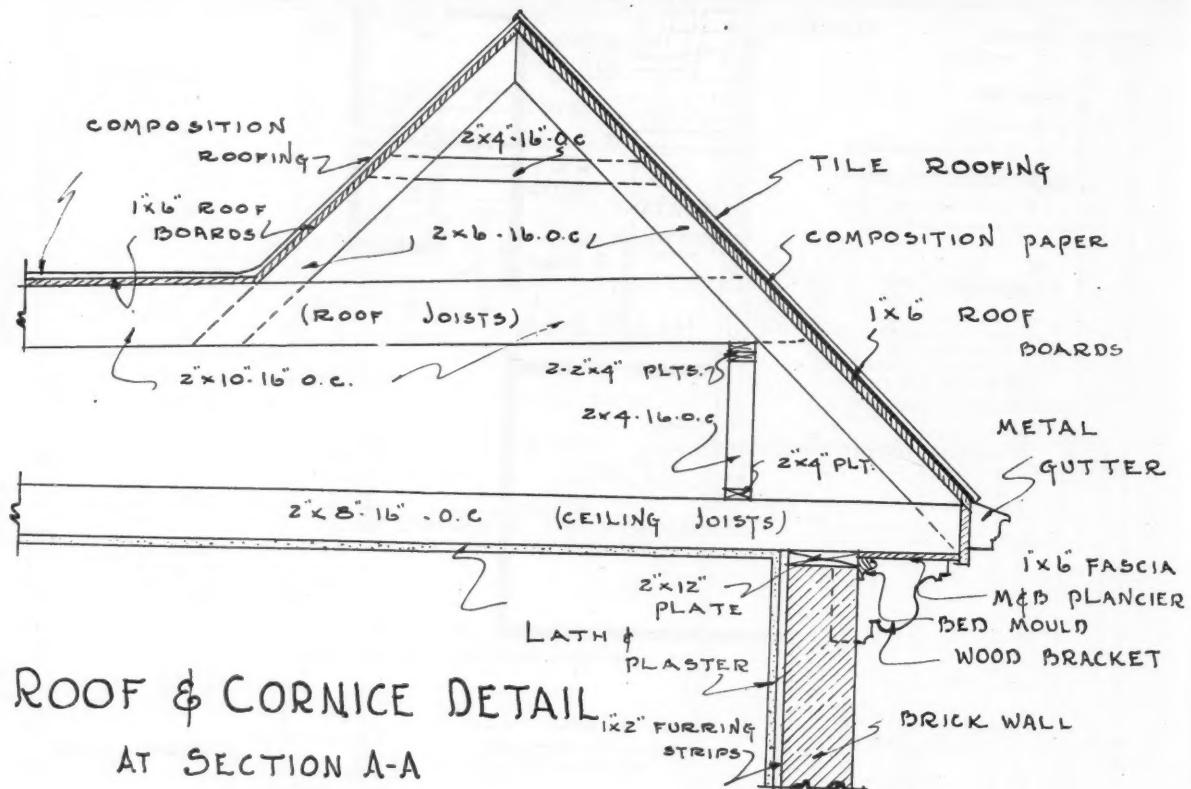
This Is the Type of Apartment Building Which Is Doing so Much to Beautify the Residential Sections of Our Cities.
It is shown in full colors on the front cover.



This First Floor Plan of Our Front Cover Home Also Applies to the Second Floor.



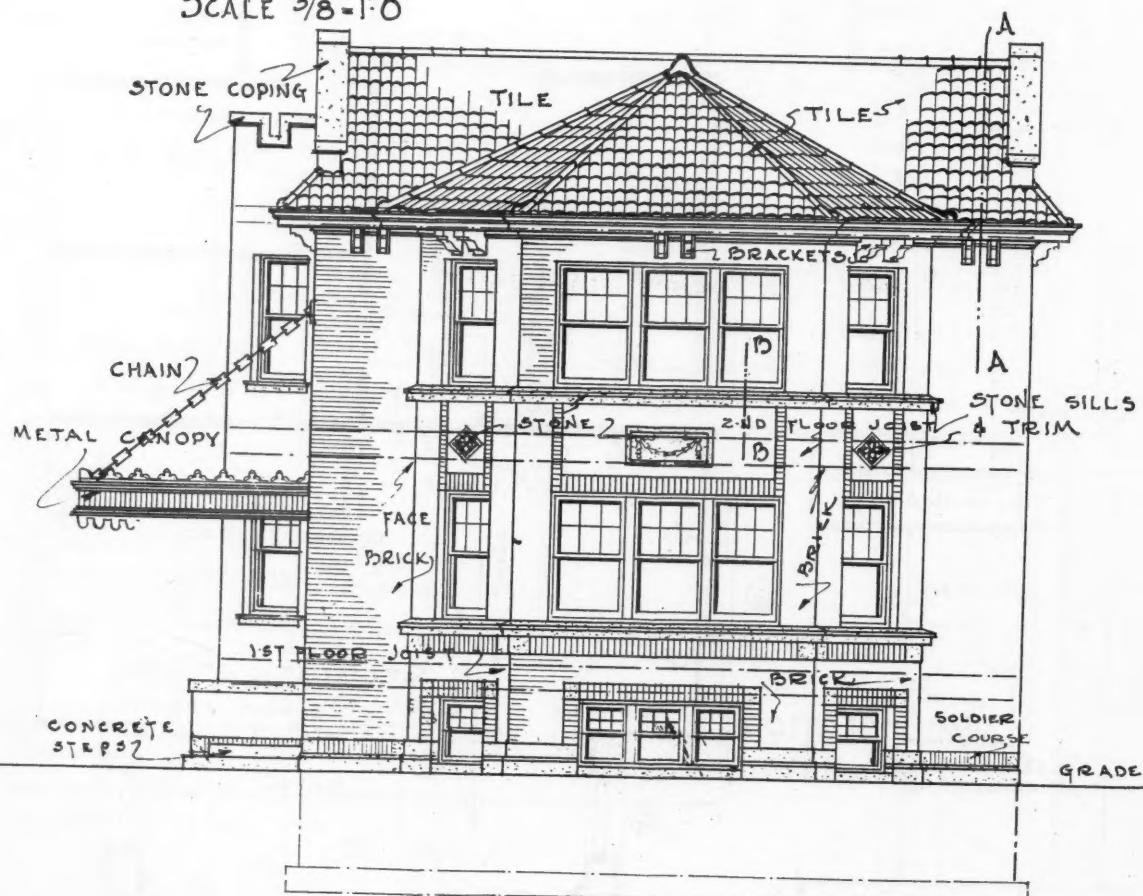
The Basement Contains, in Addition to the Usual Laundry, Store Rooms and Heating Plant, a Recreation Room.



ROOF & CORNICE DETAIL

AT SECTION A-A

SCALE 3/8"-1'0"

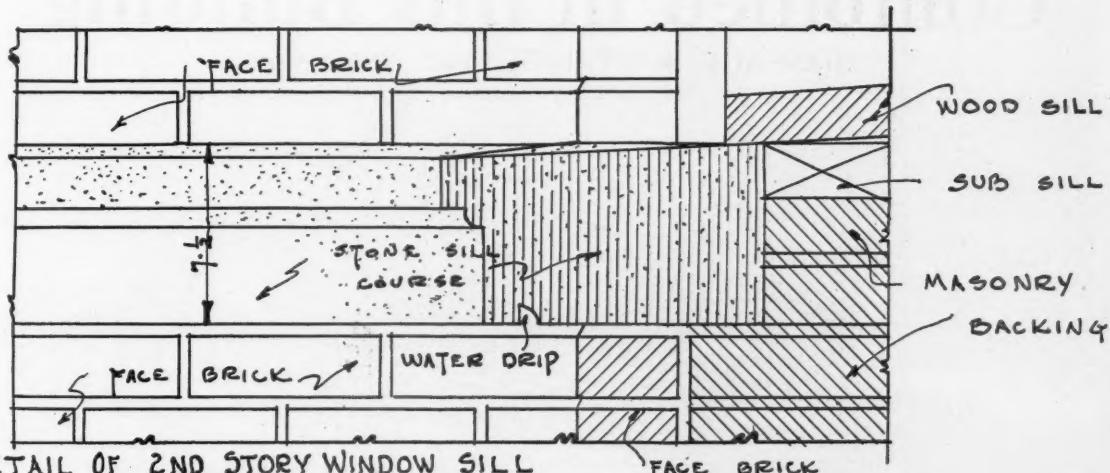


FRONT - ELEVATION

SCALE 1/8"-1'0"

SHEET - 3.

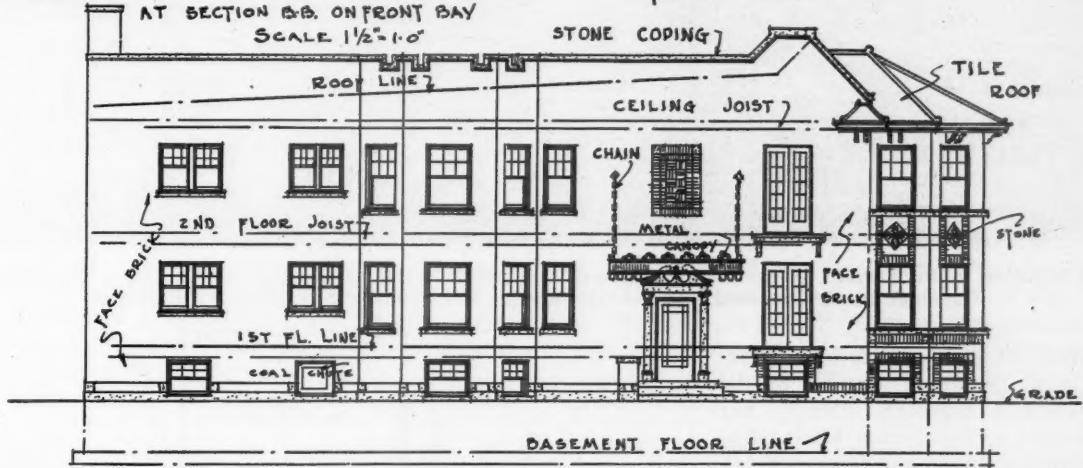
Front Elevation and Roof and Cornice Details of Our Front Cover Home Two-Apartment Building.



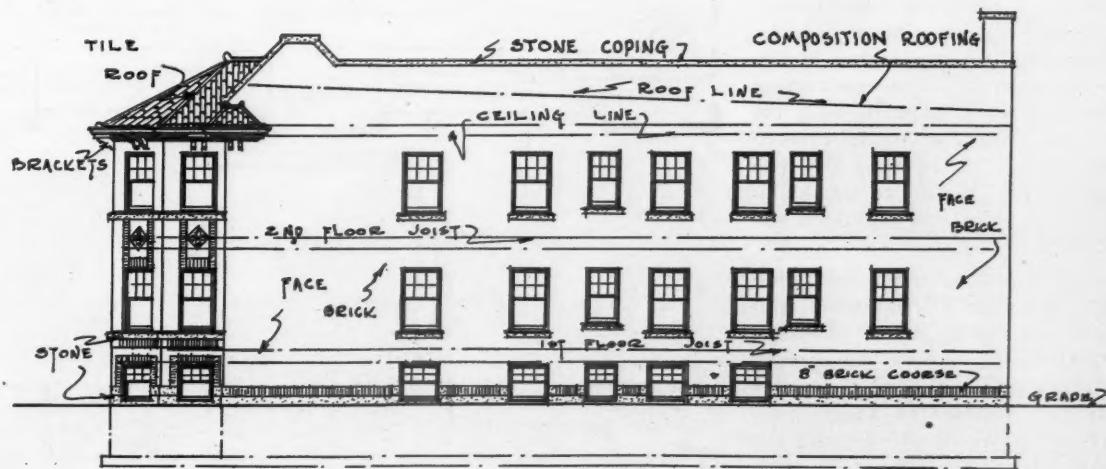
DETAIL OF 2ND STORY WINDOW SILL

AT SECTION B-B. ON FRONT BAY

SCALE 1 1/2"-1'-0"



~LEFT~SIDE~ELEVATION~



~RIGHT~SIDE~ELEVATION~

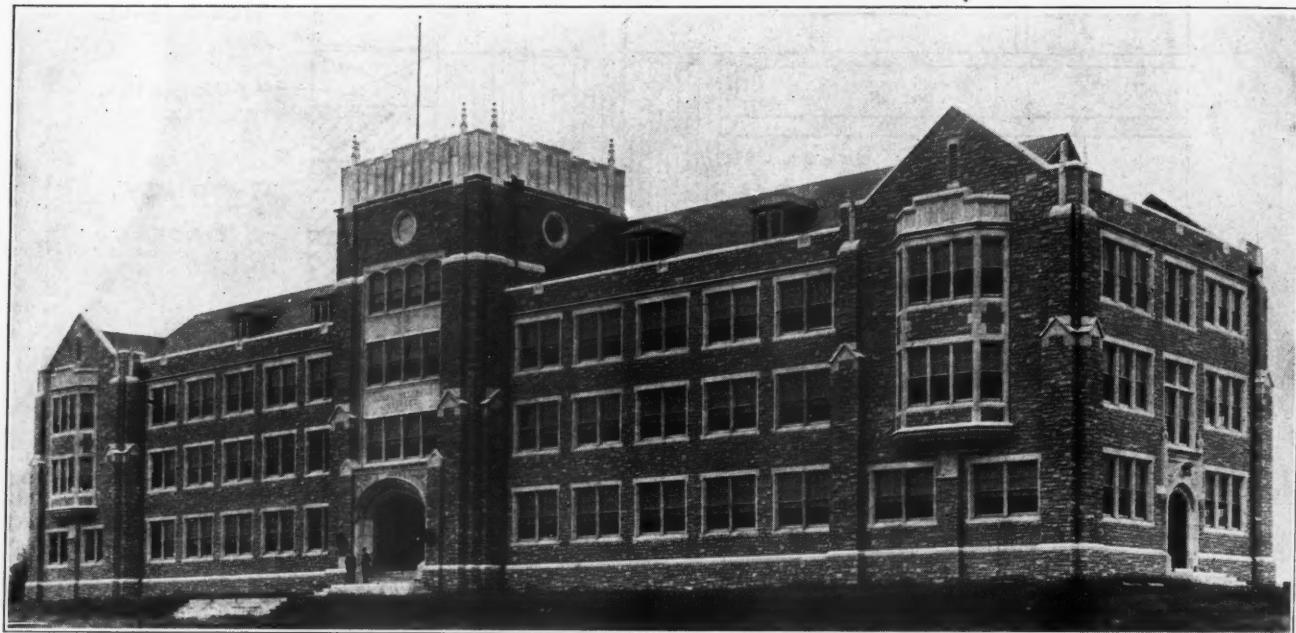
SCALE 1/16"-1'-0"

SHEET-4:

And Here Are the Side Elevations and a Detail Drawing Showing the Masonry Construction of Our Front Cover Home.

Auditorium, Stage and Gymnasium Combined in this Building

BONSACK & PEARCE, Inc., Architects



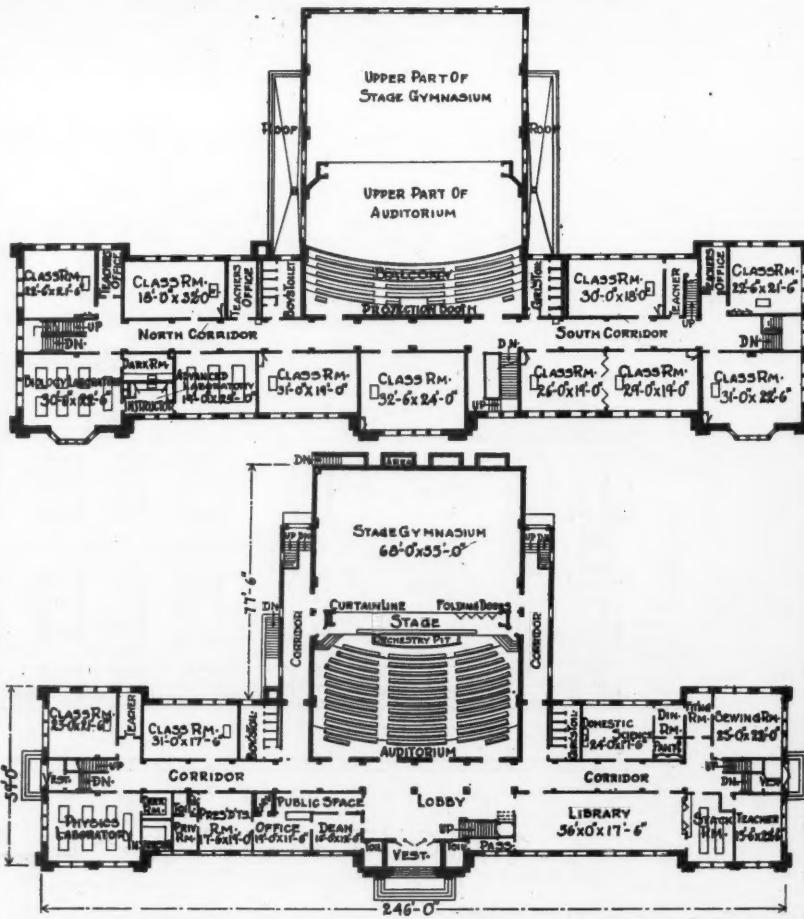
The First Building to Be Erected on the New Campus of the Ozark Wesleyan College, at Carthage, Mo., Was Built of Carthage Stone Obtained from Local Quarries and Producing an Effective Exterior.

OZARK Wesleyan College, a co-educational institution operated by the Methodist Episcopal Church, has recently moved its home from Marionville, Mo., to Carthage, Mo., and has erected a new and modern college plant. Bonsack & Pearce, Inc., of St. Louis, Mo., were selected as the architects, and designed the building shown on this page, the first to be erected on the campus.

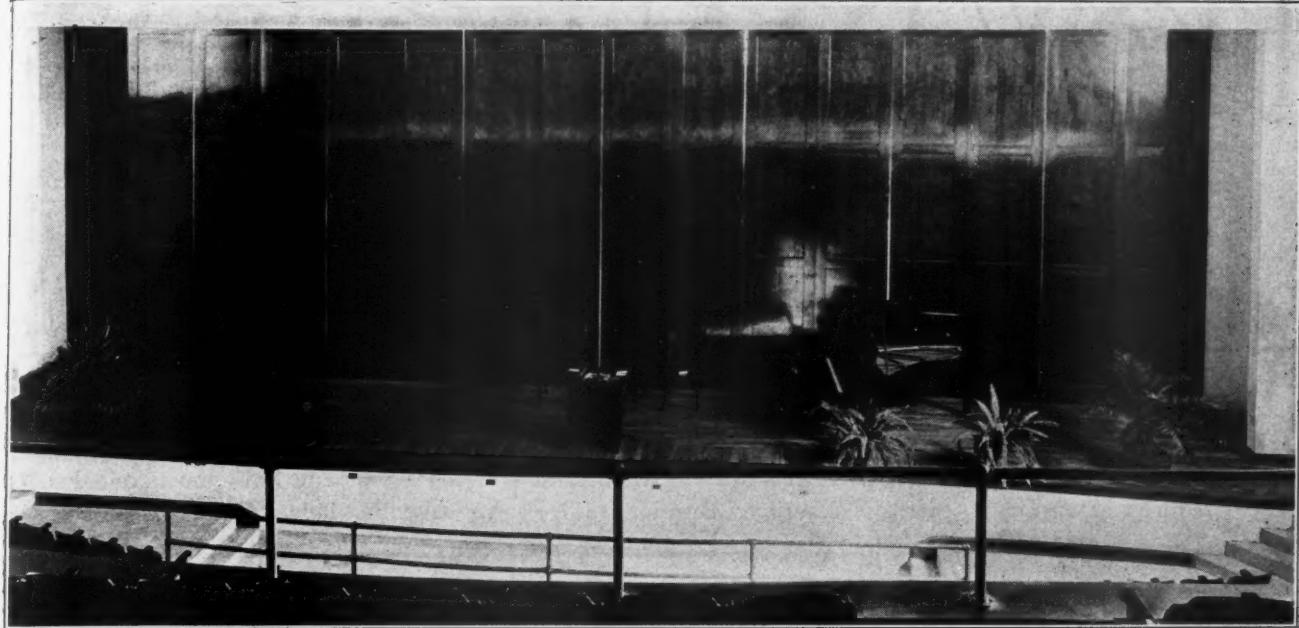
This building is done in the Tudor Gothic style of architecture from Carthage stone, a product of the quarries located in the vicinity of Carthage, Mo. The construction is fireproof, reinforced concrete with the Carthage stone walls laid up in random ashlar. The roof is of slate and the trim of Carthage stone. The cost of this building, without equipment, was slightly in excess of \$250,000.

The building contains, on the first floor, the general offices of the institution, college library and stock room, domestic science department, physics department, two large recitation rooms and the necessary toilets. On the second floors, there are nine recitation rooms of various sizes, the biological laboratory, incorporating the general laboratory and supply room, instructors' rooms and an advanced laboratory.

On the third floor are the chemistry department, with general and advanced laboratories, the instructors room, dark room and lecture room, three recitation rooms



First and Second Floor Plans of the Building Show the Arrangement of Various Departments and of the Unusual Stage and Gymnasium Combination.



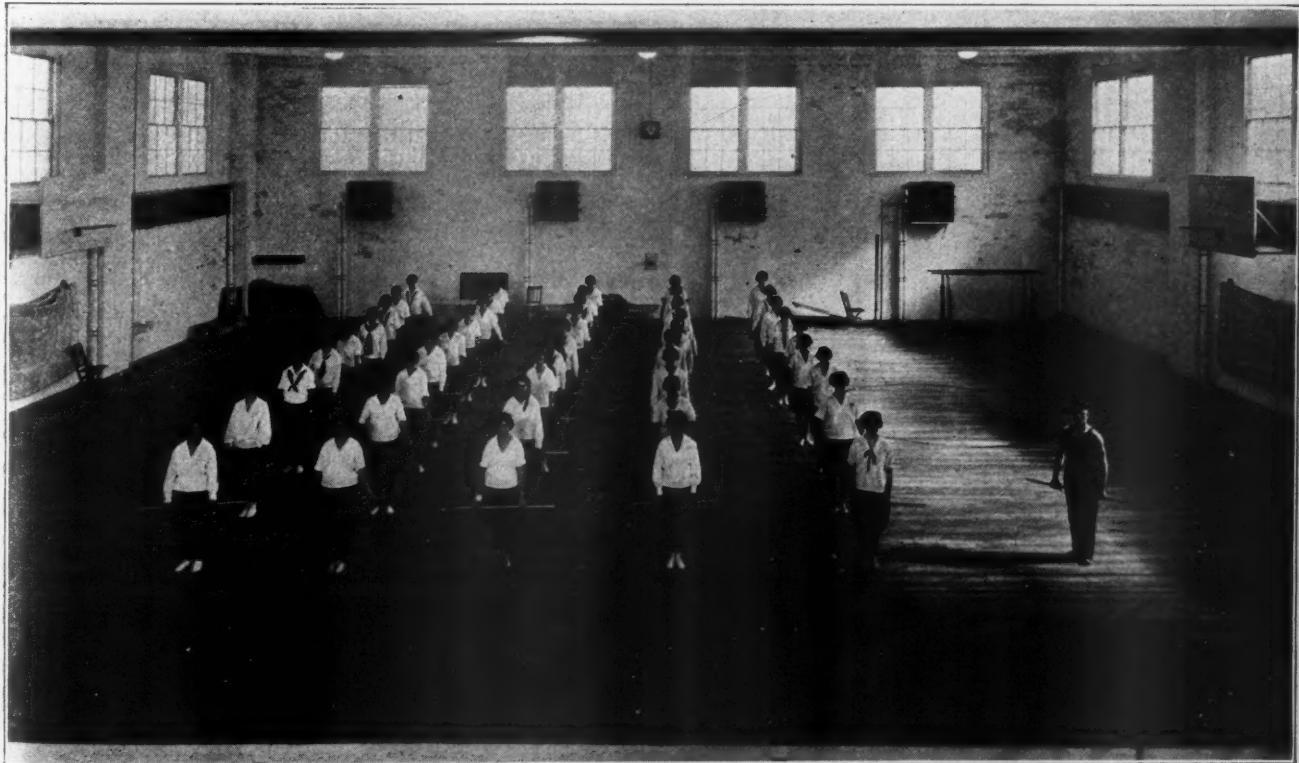
With the Folding Doors Closed the Auditorium Stage, of the New Ozark Wesleyan College Building, Resembles Any Other Stage to Be Found in a School or College Auditorium, but the Doors Can Be Folded to the Sides, Completely Out of the Way, to Reveal the Gymnasium, as Pictured in the View at Bottom of Page.

and a museum, teachers' rest rooms, four studios and nine music practice rooms and a lecture hall with a motion picture machine for general use.

Through the main entrance of the building the auditorium is reached. This hall seats one thousand persons. The stage is one of the outstanding features of the building. It measures 45 by 68 feet and is so arranged that the rear portion may be cut off by means of folding doors, to make a stage of ordinary size for general use, facing the auditorium. When the doors are opened the rest of the space becomes

a part of the stage and this space provides a small, standard basket ball floor and gymnasium. Underneath this stage locker rooms, showers and toilets are provided.

In the basement there is also a large cafeteria and kitchen, and the boiler, fuel and fan rooms. Teachers rooms and toilets are provided on each floor. The first floor corridors and entrance have marble floors and wainscot, as have all the toilets. Other corridors have composition, monolithic floors with sanitary cove base and the rooms are floored with maple.



The Stage Gymnasium Measures 68 by 55 Feet, Not Large but of Sufficient Size to Provide for a Standard Basket Ball Floor, as Well as for the Usual Physical Training Apparatus. When in use, the auditorium proper provides seating for 1,000 spectators.

HOW DAN DOES IT

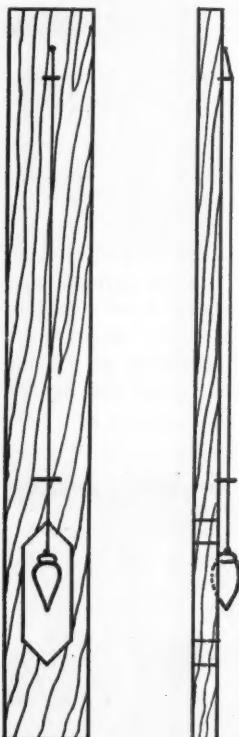


A Department for Passing "Life Savers" along to other Builders

\$2 for an Idea

Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it.

Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.



A Board Like This Makes it Easy to Use the Plumb Bob:

After reading Nels N. Oie's method of using the plumb bob, in the October issue, I decided to send in my method. Take a strip $3\frac{1}{2}$ inches wide and three feet long. Cut a slot 2 by 5 inches, 4 inches from the bottom and scribe a line up the middle of the strip from the top of the slot.

Fasten the cord on this line a short distance from the top of the strip and, slightly below it, drive a staple to hold the cord a trifle way from the strip. A short distance above the slot drive a similar staple, leaving about $\frac{1}{4}$ -inch play behind which the cord is strung. Use the gauged line for a guide.

JOE C. BOYER,
Star Route, Park Falls, Wis.

For Framing Garage Doors

IN the September issue, Mr. Tacinelli described a weather-proof garage door. I approve of his door and use this style of construction right along but form the step with a piece of $\frac{1}{4}$ by 3-inch iron, thus forming a hard edge, straight and square, which will not break off.

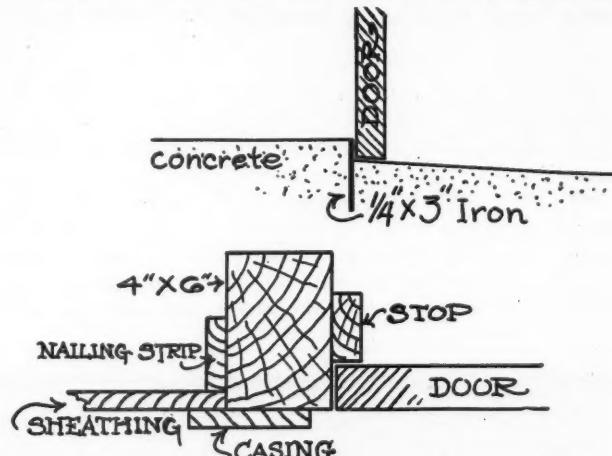
I also offer a simple, rugged jamb construction which makes one job of jamb setting and framing the opening. Make the jambs from 4 by 6 fir stock and place them flush with the outside of the sheathing. Then case to cover the joint. This makes a solid foundation for the butts and frames the opening and jamb in one operation.

TRYON G. BENHAM,
Box 660, New London, Conn.

Plug That Won't Pull Out

I HAVE always noticed that plugs driven into brick or concrete, to receive screws or nails, nearly always come loose in time

or as soon as the wood plug shrinks. Therefore, when drilling for a wooden plug, I always drill the hole as a dentist drills for a filling in a tooth, larger at the inner end than at the opening. After my wooden plug is made,



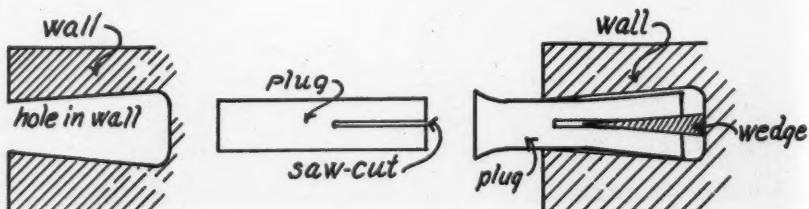
This Type of Construction for Garage Doors is Simple and Rugged and Makes a Really Weatherproof Door.

I make a saw cut in the end that goes in first and put a small wooden wedge in the saw cut. As the plug is driven, the wedge is also driven, into the plug, and spreads the end of the plug so that it cannot come out when it shrinks.

TED GREVILLE, 5128 34th St., San Diego, Cal.

Method of Ageing Shingles Given

IN response to a request made to the Bureau of Information on how to treat Western red cedar shingles and shingles to get a weather-beaten effect, Otto Hartwig, paint specialist for the Bureau, recommended the following treatment:



When Inserting Wooden Plugs, for Nailing or Screws, in Concrete or Brick, the Fault of Future Loosening of the Plug Can Be Overcome by Making the Hole Larger at the Inner End.

How Dan Does It

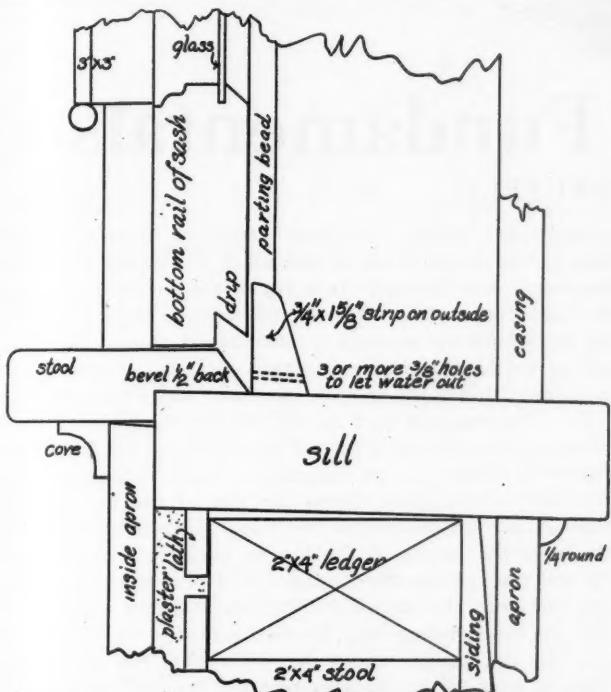
95

A priming coat of lead and oil with a touch of raw umber and lamp black should be used. From six to seven pounds of lead to one gallon of raw linseed oil, or, better still, some fat oil, with the lamp black and raw umber added, will give a fairly good driftwood effect.

Some painters prefer to coat the wood with lime. This process is completed by oiling the shingles when the lime coat is thoroughly dry. *

Leakproof Casements

I AM enclosing a sketch showing in detail my method of treating the bottom rail of a casement sash to prevent leaking. I make the frame the same as for double hung



This Drawing Fully Illustrates a Method of Handling Casements to Assure Against Leaking.

windows except that the length is $\frac{5}{8}$ inch longer than the sash and the pulley stiles are reversed. Stock material can be used throughout.

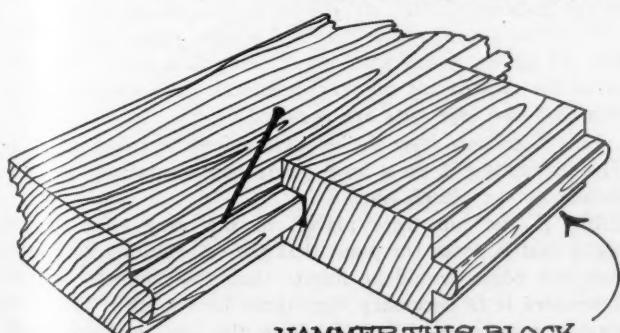
H. J. ACKERMAN, 11218 S. Normandie Ave., Los Angeles, Cal.

*

A Flooring Laying Aid

IN laying flooring you should never hammer the flooring that you are laying in order to get a tight joint. Get a short piece of the same material, just a few inches long, place this against the edge of the flooring as shown in the illustration, and hammer it. You can hit it harder without marring the flooring and get a good tight joint.

ARNOLD FLEER, La Grange, Mo.



The Use of a Small Piece of Flooring Material for Hammering Flooring Joints Tight Prevents the Damaging of the Flooring Material with the Hammer.

Stopping Window Leaks

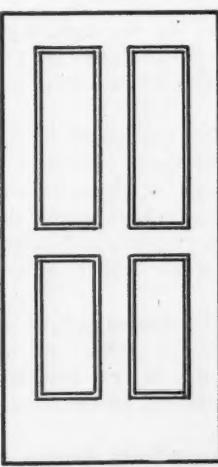
I AM sending a sketch of a method I have found successful in stopping window leaks when, due to a driving rain or ice forming on the outer edge of the sill and later thawing, water backs up under the stool to apply this remedy. Plow a groove in the stool a half inch or so from the outer edge, using a half round cutter preferably. Pack this groove very full of plastic cement, such as used on roof flashings, and replace the stool. Upon re-nailing, a small quantity of the cement becomes spread between the stool and sill which, with the packed groove above, makes a water tight seal. Do not use so much cement that it will ooze out and stain the visible portion of the wood.

ERNEST GUSTAFSON, 31 Spruce Ave., Kane, Pa.

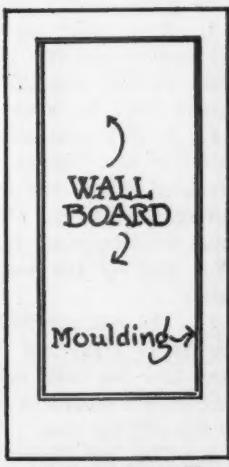
*

Repairing Old Doors

IN most old doors, particularly the cheaper, panelled doors, the panels sag, slip out of place, split and crack. If you wish to repair such doors with little expense here is a method that will make a good looking door. Get enough wall board to cover the entire door except four inches all around, square it up and tack onto the door.



OLD DOOR



NEW DOOR

Old Doors with Panels Cracked, Sagged and Out of Place Can be Satisfactorily Repaired by the Use of Wallboard and Moulding as Shown Here.

This covers all the panels. Put a narrow strip of moulding all around the wall board. Treat both sides of the door in this way and then give it a good coat or two of paint and you will have an expensive looking door with a long panel the entire length. This may be used for all interior doors and for the inside of doors that open outside. I have saved a good many dollars by using this method.

KATE A. BATSON, Wiggins, Miss.

INSTRUCTIONS *in* ROOF FRAMING



A Summary of Fundamentals

By JOHN T. NEUFELD

IN each one of the paragraphs which follow one of the fundamental principles of roof framing will be briefly summarized and, on the opposite page, it will be illustrated by a sketch corresponding by number in the lower left hand corner.

1. This shows what is meant by the run, rise and span of the rafter. Note that the run is one-half of the span where both sides of the roof are even.

2. Pitch is the slant or slope of the roof. It is expressed as a ratio of the rise to the span such as $\frac{1}{4}$, $\frac{1}{6}$, etc., meaning that the rise is $\frac{1}{4}$ or $\frac{1}{6}$ of the span. A second way to express the pitch is to give the rise per foot run. The illustration shows a rise of eight inches per foot run.

3. The length of the rafter may be found by scaling. Take the run of the rafter on the blade of the square and the rise on the tongue, letting one inch represent one foot; then measure the distance between the two points.

4. The length may also be found by square root. Square the run, then square the rise; add the products and take the square root of this to find the length of the rafter. This gives a very accurate answer.

5. If we take the rise per foot run on the tongue of the square and the 12 representing 1 foot of run on the blade we may step off the length of the rafter, applying the square once for each foot of run.

6. A very satisfactory way of finding the length of the rafter is the "length per foot run" method. Tables are prepared where the length per foot run is given for the different pitches. The carpenter then selects from the table the length per foot run for the given pitch and multiplies this by the run in feet, to get the length of the rafter.

7. The rise per foot run taken on the tongue and 12 on the blade gives the cuts for the common rafter; or we may take the total run and the total rise in feet and, letting inches represent feet, use these numbers on the square to lay out the cuts.

8. The cut shown in Fig. 8 is sometimes known as the birdsmouth. It is laid out by the same numbers as the other cuts. The horizontal part of this cut should be enough to give proper bearing for the rafter.

9. The length of the rafter as generally figured is to the center of the building; therefore if a ridge board is used allowance must be made for this. The allowance is not one-half of the thickness of the ridge from the length of the rafter, but one-half of the thickness of the ridge on a level or horizontal line. This can easily be done by taking a piece of wood of the same thickness as the ridge and using it to mark for the allowance for the ridge.

10. It is also important to know the correct line to

measure on. Some carpenters prefer to measure on the edge of the rafter while others mark a line known as the measuring line through the point of the rafter that strikes the edge of the plate. This is theoretically the correct line but we would not venture to advocate it above everything else as we have learned some time ago that it is not wise to assume that there is only one best way for everybody.

11. The methods used to find the length of the common rafter may also be used to find the length of the hip rafter. Figure 11 illustrates an imaginary square placed so that the edge of the blade forms the run of the hip and the edge of the tongue forms the rise. This shows that we can scale the length of the hip by taking the run on the hip and the rise on the tongue. It is best to use a square and rule with the inches divided into twelfths so that one inch on the building may be represented by $\frac{1}{12}$ th of an inch on the square and ruler. To find the run which must be found first, we also measure on the square. For example, in Fig. 11 the run of the hip may be found by measuring between the points 8 on the blade and 8 on the tongue.

12. Square root is also one of those necessary evils that comes very handy, providing you are not afraid of it. First the run must be found and then the length as shown in Fig. 12.

13. Tables giving the length per foot run of the hip rafter are based on the length of the hip per foot run of common rafter. This is illustrated in Fig. 13. Note that the run of the hip is 12 inches for each foot of run in the common rafter. This is for all pitches as long as both sides of the hip roof are of the same pitch. The length of the hip per foot run of common rafter varies with the pitch of the roof. Tables giving this are found on steel squares and in books on roof framing. To find the length multiply the given length per foot by the run of the common rafter, as shown in the illustration.

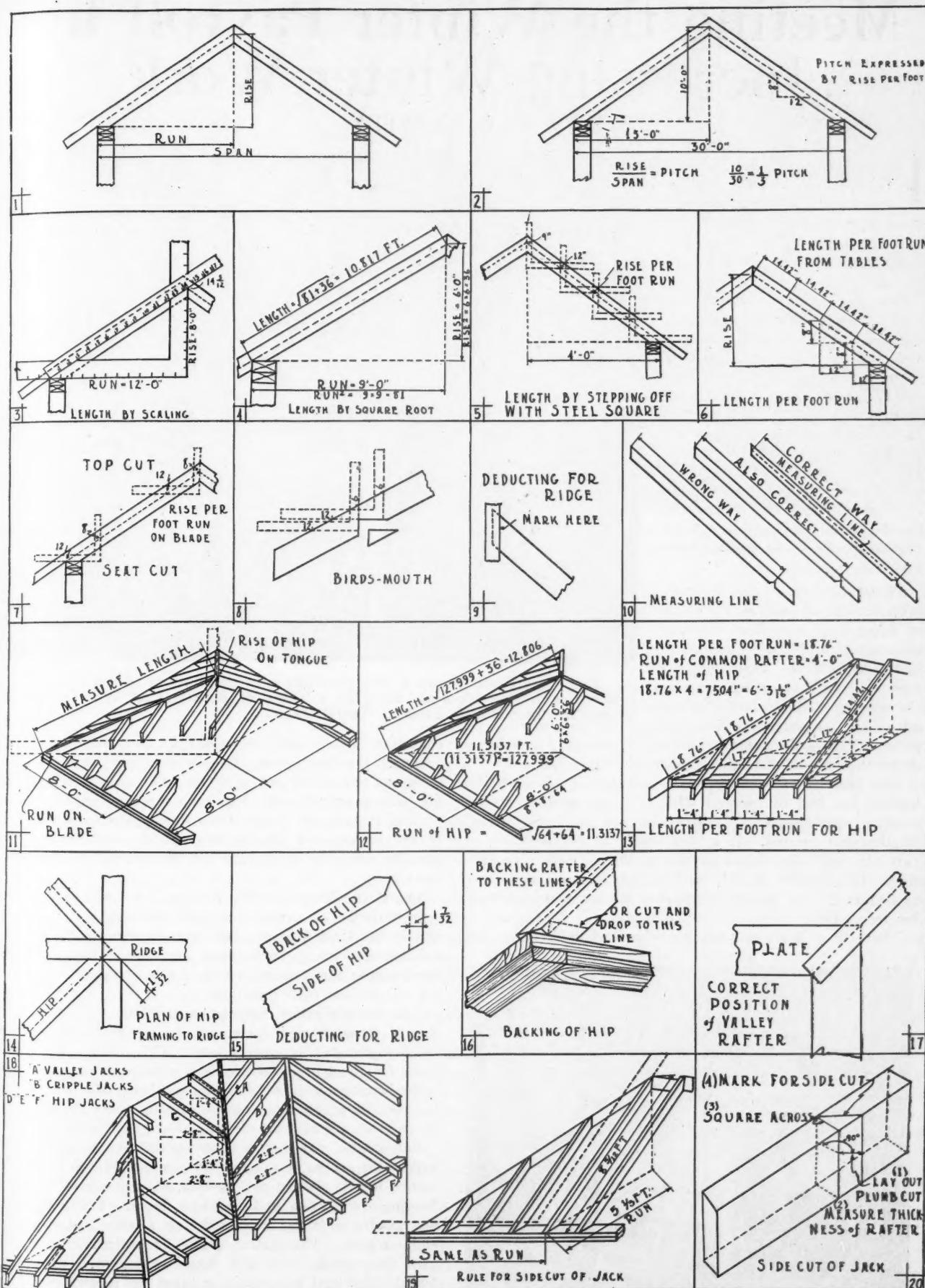
14. The framing for the hip at the ridge end varies. Fig. 14 shows a common way. This is a plan view and gives the dimensions on the horizontal. We also see from this that two side cuts are required.

15. Note here how the deduction for the ridge is made. The measuring is on a level plane (horizontal) or perpendicular to the plumb line.

16. If the hip were placed to the very edge of the plate, that is, from the point that the calculations are made, then the edges would be higher than the common rafters. Therefore it is necessary that these be cut off. This cutting is sometimes called "backing the hip" and we could give a number of fancy rules for obtaining the line to

(Continued to page 200)

Roof Framing



This Group of Sketches Illustrates the Various Principles of Roof Framing Summarized on the Opposite Page. The numbers, in the lower left hand corner of each sketch, correspond with the paragraph numbers.

Meeting the Winter Payroll by Increasing Winter Work

By W. L. CLAFFEY

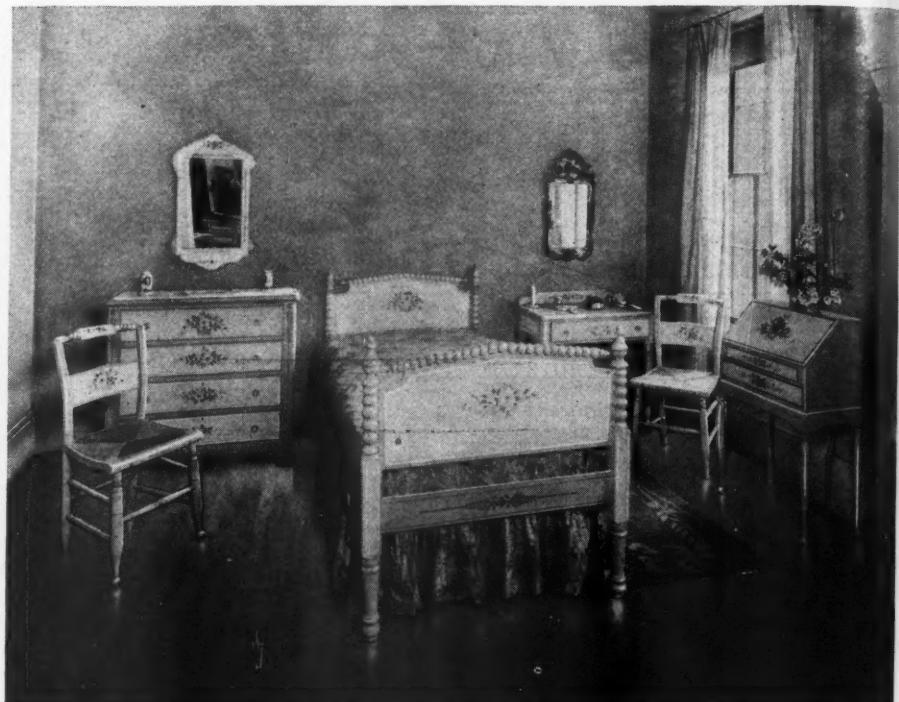
IT has been said, had Rip Van Winkle been either a builder or general contractor he could never have climbed to his particular niche in the hall of fame, even though this niche is purely a literary one.

Mrs. Van Winkle's famous son might have slumbered peacefully through the springs and summers, and even the falls of those twenty years during which he was supposed to have slept without interruption, but with the approach of each winter, had he been in the building business, there would have come to harass his slumbers and disturb his oblivion, hideous nightmares concerning the winter payroll and the keeping of his organization intact through the long idle months.

When the raw cold weather, with its curtailment of work out of doors begins to show signs of abatement and the coming of spring signals the approach of a new season of building activity, the average builder finds himself with his organization shot to pieces. This is the natural result of the necessity of holding down the payroll through a season of little activity.

This has always been one of the perplexing problems the builder has had to contend with in those sections of the country where outdoor construction has not been carried on the year around. It is practically an impossibility to carry through the closed months a full strength organization. If a builder is able to keep his foremen and their assistants on the payroll, without a lay-off now and then, he does well.

There is at least one means of materially helping this



The Same Floor Shown in the Photograph at the Bottom of the Page, When Covered with Oak Flooring, Becomes a Thing of Beauty That Will Outlast the House and Increase Its Sales or Rental Value.

condition. The relief lies in a field to which not enough attention has been given in the past—the work of modernizing and renovating old buildings. The time to begin figuring on a practical method to keep the organization morale up and the payroll losses down during the winter is early in the season and the builder will do well to begin at once to seriously investigate the possibilities of this inside work.

The Home Modernization Bureau, a national organization representative of various standard building material interests in the United States, has recently announced, after an exhaustive survey, that there are more than 10,000,000 dwellings in this country which, for one reason or another, are in need of modernization.

This modernization may mean anything from putting in a new foundation, a basement or a new wing, to new lighting fixtures or oak floors. This range of possible work for the winter months is a wide one, but as flooring is the last item mentioned above, and because of the particular possibilities thereof and the ease in which the field may be entered, discussion here will be confined thereto.

Carpenters, contractors and specialists in floor laying will find it profitable to solicit systematically odd jobs in old homes for the laying of $1\frac{3}{16}$ -inch, $\frac{3}{8}$ -inch and $\frac{1}{2}$ -inch oak flooring over worn and obsolete floors. There are various grades of these sizes offering a wide range of cost and purpose. The winter season is preferable for laying this thin stock over old floors which are then thoroughly dry and in good condition to receive it. It is important that old floors be level before installing oak floors.

From an office canvass and an examination of realtors' lists of offerings, a sufficient number of prospect names



An Old Rough Floor, No Matter How Carefully Kept Painted, Requires Endless Hours of Labor to Keep It Clean, as Every Housewife Knows.



Oak Flooring of Various Sizes and Grades Can Be Laid Over Worn and Obsolete Floors with Results Equal to Oak Floors Laid in New Construction and Such Work Offers the Contractor an Important Field of Work, Especially in Winter When Work Is Needed to Hold the Organization Together.

should be obtained to begin solicitation. From that time on, the keen salesman should never know the need of new prospects. A little discreet questioning in each home visited as to neighbors and friends will keep his list growing all the while.

In the way of sales arguments the salesman will have two distinct appeals—one to the housekeeper and one to the house owner.

Keeping her house clean is one of the trials of the average woman's life. Keeping it attractive is her constant ambition. To these ends she spends many hours of thought and labor. The floors of a house are first to claim the attention of a visitor. If they are of soft spongy wood, painted or carpeted, they are one of the principal burdens of the housekeeper's life. The desire to live in a house with hardwood floors is a part of the dream of every housewife. Those living in houses with obsolete floors long for the day when they can make the change. Those who already have floors of oak would not consider moving to a house which does not have them.

The salesman will have a willing listener in the housewife. He can assure her that the new floor can be laid with but little interruption to the regular home routine. The work can be done one room at a time if necessary. None of the woodwork need be disturbed except the quarter-round at the base board. The new floor, laid over the old, will be found as sound and attractive as if oak had been used when the house was built.

When the last shaving is swept up and the new oak floor is ready for use the floor will no longer represent to the housekeeper many unhappy hours of labor. It will be a source of joy, a great pride and an economy. She knows what a change comes with oak floors. No crevices to accumulate dust or dirt, a surface requiring a minimum amount of attention; just a little refreshing at frequent intervals and the floor is bright and cheery at all times. A notable authority on home economics has said oak floors are one of the greatest blessings modern women enjoy; they are the emancipation of women who do their own work or who supervise that of others.

Oak floors not only add to home satisfaction—they add to home enjoyment as well, for when a little relaxation is in order, the rugs may be turned back, the radio turned on or the Victrola started for an impromptu dance.

To the man of the house whose responsibility it is to keep the family budget out of the red, more hard-boiled reasons than convenience and beauty must be offered and substantiated in the argument for oak floors. He has to think in terms of dollars and cents, regardless of what he would like to provide for the comfort and convenience of his family, and in just such terms the sales talk must be presented.

The principal reasons for the desirability and superiority of oak as the modern and always satisfying floor are in the facts that his investment will be greatly enhanced, the cost need not exceed that of a perishable floor covering, and the new floor will be a permanent one, outlasting the house itself. It never needs replacement and it adds real value to the house for rental or resale. Oak floors are nature's beautiful product, improving in mellowness with age.

The salesman will find a ready ally in the realtor and rental agent. From this source may be obtained convincing proof that a change from soft perishable wood or carpeted floors will be an investment certain to bring substantial returns should the house be offered for rent or sale.

No standard of costs of installing oak floors can be called general throughout the country. Local wage scales and freight rates will affect prices to some extent, but in no instance should the cost be a prohibitive one. In practically all cases it will be found less than the cost of a new carpet of good quality and but little more than the cost of new perishable floor coverings.

It is a good business, easily estimated with safety and holds a good margin of profit. Furthermore, once approached intelligently, it should develop rapidly in volume and provide each year substantial help in meeting the winter payroll and holding the organization together until a new spring activity opens with the advent of weather that is "fair and warmer."

NEWS of the FIELD



Build Clocks for Xmas Gifts

THE American Chime Clock Company, 1659-1669 Ruffner St., Philadelphia, Pa., which during the past 50 years has built up an extensive business in Grandfather clocks, furnishing works, parts and plans to both amateur and professional clock builders, has now brought out a novelty which has a particular appeal at this time when the selection of suitable Xmas gifts is a problem. In response to a demand resulting from a popular revival of Banjo clocks this company has designed a Banjo clock. It is illustrated in the accompanying sketch.



The Popular Banjo Clock Is Easily Made. It makes a handsome decoration or gift or can be sold at a good profit.

Equipment Company Expands

ANNOUNCEMENT was recently made by Philip A. Koehring, president of the National Equipment Corporation, of the acquisition by that firm, of the Parsons Company, of Newton, Iowa, manufacturer of power trench excavators, and the Insley Manufacturing Company, of Indianapolis, Ind., manufacturers of steel towers for hoisting and pouring concrete. Both companies will continue under their present management as divisions of the National Equipment Corporation. H. C. McCordell, president of the Parsons Company, and W. H. Insley, president of the Insley Manufacturing Company, become vice-presidents and directors of the parent corporation.

With the addition of these two companies the National Equipment Corporation becomes a leader in the construction machinery field. It now owns, in addition to these two companies, the Koehring Company and the T. L. Smith Company, both of Milwaukee, Wis. It has total assets of \$9,000,000 and its 1928 sales will be close to \$10,000,000. Headquarters of the corporation are located

in Milwaukee. The Koehring Company manufactures a broad line of concrete mixers, paving machines, power shovels, cranes and draglines. The T. L. Smith Company is one of the largest manufacturers of concrete mixers in the world.

The National Equipment Corporation is expanding along lines similar to the expansion of General Motors. The divisions of the corporation are operated as independent units, with close co-operation in engineering matters, standardization of production methods, warehousing, service and other angles where savings can best be realized.



Instructions in Roof Framing

(Continued from page 96)

which the edge must be worked. But the illustration shows a simple way of knowing how far to cut. It is not necessary to hold the hip rafter on the plate to find this line, but just take a piece of timber cut square and hold it under the seat cut of the hip and thus mark how far the hip must be beveled off.

Very often the hip is not beveled off but is lowered by cutting it off to the line shown in the illustration. It will not do to move the hip forward unless it is cut off sufficiently at the upper end.

17. The length of the valley rafter is found in the same way as the length of the hip.

18. Jack rafters lie in the same plane as common rafters. Therefore we can find the length in the same way by various methods that are used for finding the length of the common rafter. The run of the jack rafter is usually the same as the distance of the seat from the corner of the building. Thus if rafters are placed 16 inches on centers the first one may be 16 inches from the corner and would therefore have a run of 16 inches. Multiplying the length per foot run by the run in feet gives the length. The length may also be found by taking the length of the common rafter and subtracting from it the difference in length of each succeeding jack rafter. There are three equal spaces between rafter "D" and "G" and there are four equal spaces between the corner of rafter "G".

Rafter "D" is $\frac{3}{4}$ th as long as rafter "G".

Rafter "E" is $\frac{1}{2}$ as long as "G".

Rafter "F" is $\frac{3}{4}$ ths as long as "G". Roof framing tables usually give the difference in length of the jack rafter for the different pitches; both for rafters 16 inches on centers and for rafters 24 inches on centers.

19. A rule for the side cut of the jack rafter is take the length of the common rafter on the body of the square and the run on the tongue of the square and mark along the body. In this illustration the square is placed in such a position that the body coincides with the common rafter and the tongue with the plate. The distance from the foot of the common rafter to the corner of the building is the same as the run of the common rafter, therefore the term "run of common rafter" is used in the rule given. Thus to lay out the side cut for the rafter shown we would use the numbers 8 5/12 and 5 1/3, marking along the arm of the square on which the 8 5/12 is taken.

Another rule for the side cut is to use the length per foot run on the body of the square and 12 on the tongue and mark along the body.

20. This figure shows a very common method of getting the side cut of the jack rafter. It is based on the fact that the bevel of the side cut always makes a 45-degree angle with the side of the rafter but, of course, the angle on the back of the rafter changes with the pitch. Follow the steps of operation in the order named in the figure.

Contractor-Built Houses

Distinctiveness and Originality Are Found in Many Contractor Built Houses Being Erected Today

THE common place and the endless repetition of old styles and manners are unfortunately associated in the minds of many people with houses built by contractors without other plans than those derived from their own experience or from the plan-books of various agencies. Often this association is justified and more by the actual work done. But that artists and men of good taste and originality exist among contractors is demonstrated almost daily, in residences in all sections of the United States.

And why shouldn't this be so? Before the Middle Ages there were no architects, so called. There was no tradition gathered into books of reference. Great cathedrals lifted their spires or domes into the air out of nothing but the chief builders' experience and taste, plus the taste and ambition of the time. "We will make it so-and-so," they said, and made their drawings as best they could.

Stresses and strains were calculated by rule-of-thumb, out of individual experience, and the experience that had been handed down by builders who had gone before. A good building, pretty much, was one that stayed up, and a bad one was one that fell down. And it never was a ten to one bet that any building would stay up. Yet these architectural monu-

ments compel our acknowledgement of their beauty, they serve as models or inspiration for much of present-day building, and we continually are exhorted to return to the careful craftsmanship of those times.

That this tradition of good taste, originality and crafts-



An Unusual Living Room in a Contractor-Built House, the Residence at 1111 Colfax Ave., Evanston, Ill., David Oliver, General Contractor, in Which the Dominating Feature Is the Use of Curves Where Angles Are Ordinarily Used.



Here Is an Unusual Treatment of the Entrance Problem in a Contractor-Built House. All the space has been utilized for the living room yet there is a distinct air of separateness about the entrance. The residence of E. G. Lewis, 638 Fair Oaks Ave., Oak Park, Ill.

manship is being carried on by contractors of today can be discovered by an investigation of their work in almost any community. Interior views of two such examples, found in a casual visit to two of Chicago's suburbs, are used to illustrate this article.

One is the residence, at 1111 Colfax Avenue, Evanston, Illinois, designed and built by David Oliver, general contractor. Study of the photograph will reveal just how far out of the commonplace this house is and yet with what restraint the whole has been executed to keep it within the bounds of good taste. The dominating feature of this interior is the use of curves where angles ordinarily are used.

In the living room, with the exception of the framing of the casement windows and the soffit and jamb of one small window, soffits of all recesses and doors die away into the jambs in graceful curves. Then to bring the whole room into harmony the ceilings are



The Living Room of the E. G. Lewis Residence, Which Was Built by the Contractor from Ideas and Suggestions Furnished by Mr. Lewis. The arched doorways and opening into the stairway are interesting features and an example of originality in a contractor-built house.

coved. To sharpen the effect of the curves the fireplace lines are straight and emphasized with a course of tiles.

Virtually the same treatment has been carried out in the dining room achieving practical usefulness as well as the decorative effect in the recesses. No small part of the effect of this interior is due to the use of rough-textured walls for which plastic paint was used as the medium. Lawrence and Danielson of Evanston were the decorators.

The second residence visited is that of E. G. Lewis, 638 Fair Oaks Avenue, Oak Park, Illinois, which was designed by the contractor from ideas and suggestions furnished by Mr. Lewis.

In this residence the conventional vestibule has been done away with. And while this in itself is not a novelty the treatment of the entrance is decidedly original. Entering, one steps upon a landing about 5 feet across, down from which two steps lead to the living room proper. Thus the effect of a distinct entry-space is obtained while, at the same time, the space is utilized to lengthen the living room.

Doorways are arched, as are openings into the stairway from the living room and hall to the kitchen, and through these openings can be seen a smaller arched opening from the stairway into the sun room. That this makes an effective picture can be seen readily. The two larger of these stair openings have iron grilles of simple but effective design. The fireplace is of brick, and like the house built by David Oliver, the walls are rough-textured, both the texture and color having been obtained with a single coat with plastic paint.



Houses Fit for Heroes

(Continued from page 70)

are provided in 80 per cent of the houses and the bathroom are the three greatest boons which have been conferred on the tenants who have been fortunate enough to secure the new homes. The "battle of the bath" ended in 1924 by the inclusion in the Housing Act of that year of a provision to the effect that every municipal housing

or private enterprise scheme must, in order to secure the grant of financial aid from the government, include in the accommodation to be provided a bath in a separate bathroom.

The Battle with the Slum

But, while the "battle of the bath" was ended in victory, the greatest of all the housing battles which have to be waged in Great Britain has not yet been commenced in earnest. Despite all the efforts made since the war closed, we have not yet conquered the housing famine which still continues to perplex the local authorities of many of our great centers of population. It has been estimated that before we can claim that normal condition of a pre-war kind are again secured another 500,000 houses must be built.

These figures, moreover, leave entirely aside the work of cleansing British cities of the slums which disgrace only too many of them and the ridding of our small towns

and villages of groups of wretchedly unfit survivals of the "Jerry" housing activities of the earlier part of the nineteenth century. It is not possible to look back on that period of unexampled industrial expansion without an acute sense of shame that men, in their keen search for wealth, should have been so blind to the evil conditions which were growing up side by side with their factories and mills. Between 1830 and 1870 40,000 back-to-back houses grew up in Birmingham courts and alleys and provide homes for 200,000 people. Leeds, Manchester, Liverpool and London all have terrible records of a similar kind. What bad housing means in Liverpool can be seen from one of the accompanying photographs. The writer is especially fortunate in being permitted to use this actual photograph because the Liverpool City Council have quite recently swept this court away and have made provision for the rehousing of 95 per cent of the dispossessed tenants.

The unpalatable truth must be told frankly and the writer has no hesitation in doing so because he knows that the British people are determined to rid the country of slums. What is the extent, then, of British slums? In answer it must be said that there are at least a million houses unfit for human habitation in England and Wales. To provide for the overcrowded families in these slums at least a million and a quarter new houses are needed and must be built as speedily as possible. During the past nine years our slums have had a further lease of life—because it has been quite impossible to close houses so long as a housing famine existed throughout the country. This estimate of a million applies only to England and Wales. A Scottish Royal Housing Commission has reported that a quarter of a million houses are needed in Scotland to secure a clean bill of housing health there.

It is the duty of the British building industry to act as the executive hands of the state in dealing with this great problem of national honor and well-being. Despite all that has appeared in various reports that have crossed the Atlantic, the writer desires, through the AMERICAN BUILDER, to tell the leaders of the Great American building industry that their British fellow workers have fulfilled the duty placed upon them with vigor and good-will.

AT
1
BO
8
CL
1
DA
2
DE
1
DE
5
KA
2
LO
1
LO
1
MI
9

Here's to a Prosperous New Year

JOHNSON'S WHOLESALE PRICES WILL HELP YOU MAKE IT SO

In all sincerity, we wish you a Merry Christmas and success in 1929. That our greeting is genuinely meant is certified by our constant endeavor, throughout the entire year, to supply you with the finest interior finishes that can be made. Further proof is our offer of wholesale prices through your painting contractor.

We heartily thank you for your appreciation of our efforts, as shown by your letters, and for your unfailing co-operation.

JOHNSON'S INTERIOR FINISHES

WAXES • VARNISHES • ENAMELS • WOOD DYES • FILLERS • WALL FINISHES

Use an Electric Paint Burner during 1929
FREE

Service furnished everywhere

ATLANTA 16 W. Peachtree Pl.	IVY 4343	NEW ORLEANS 500-506 Magazine St.
BOSTON 852 Summer St.		RAYMOND 2001
S. BOSTON 4505		NEW YORK 270-276 Lafayette St.
CLEVELAND 1645 Superior Ave.		CANAL 7593
CHERRY 5643		OMAHA 1407 Harney St.
DALLAS 2900 Main St.	7-1600	ATLANTIC 1634
DENVER 1715 Arapahoe St.		PHILADELPHIA 620 S. Delaware Ave.
KEYSTONE 1959		LOMBARD 8498
DETROIT 5432 Grand River Ave.		MAIN 2214
WALNUT 2172		PITTSBURGH 926 Duquesne Way
KANSAS CITY 2433 McGee Trafficway		ATLANTIC 0638
GRAND 5375		SAN FRANCISCO 1250 Folsom St.
LOS ANGELES 1151 Sante St.		HEMLOCK 1150
WESTMORE 1413		ST. LOUIS 2116 Locust St.
LOUISVILLE 115 South 6th St.		CENTRAL 8677
CITY 6943		ST. PAUL 1930 St. Anthony Ave.
MILWAUKEE 936 Third St.		MIDWAY 2822
LINCOLN 912		SEATTLE 314 Bell St.
		ELIOT 5020

Have you received one of the new Johnson Electric Paint Burners yet? If not, ask your painting contractor to send for details of our special offer. Give him this coupon today.



CLIP THIS TO LETTERHEAD OR BUSINESS CARD

S. C. Johnson & Son, Dept. AB-12, Racine, Wis.
"The Interior Finishing Authorities."

Please send me your wholesale price list and tell me how I can get a Johnson Electric Paint Burner free.

Signed



Pine Construction is the Most Economical

THE modern trend in home construction away from the raw, cold plastered walls to the rich, warm Pine panelled walls, which grow more attractive as the years pass, is an indication of the study made by architects and builders to obtain, economically,

the most in home enjoyment for their clients.

The illustration above shows the Pine panelled walls in the dining room of the Webb House which was built about 1753 at Wethersfield, Connecticut. Since early colonial days, dwellings

SHEVLIN PINE

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



The Governor Wolcott House, built in 1753 and the oldest house now standing in Litchfield, Connecticut, is a convincing example of the economical long life of Pine construction.

built of Pine have given the most years of real home comfort for each dollar expended.

There is no shortage of the proven building material of our ancestors as there are sufficient stands of carefully selected Shevlin Pine to build the nation's homes for decades.

Shevlin Pine Reduces Building Costs

Although Pine may cost a trifle more than some other lumber, Shevlin Pine reduces building costs by speeding up construction.

Carpenters and painters work faster with Shevlin Pine because it works with them. It is light in weight and easy to handle. It fashions under tools willingly, quickly takes and holds nails, absorbs paint readily and retains it tenaciously.

"Certified by Centuries of Service"

There is no guesswork about a home properly constructed of Shevlin Pine. The nation's oldest homes testify to the

centuries of service given by Pine like this—real American homes like the Governor Wolcott House shown on this page which was built for one of the signers of the Declaration of Independence.

Leading lumber dealers throughout the nation can supply you with Shevlin Pine. There are five varieties: Shevlin California Sugar Pine, Shevlin Northern White Pine, Shevlin California White Pine, Shevlin Norway Pine and Shevlin Ponderosa Pine.

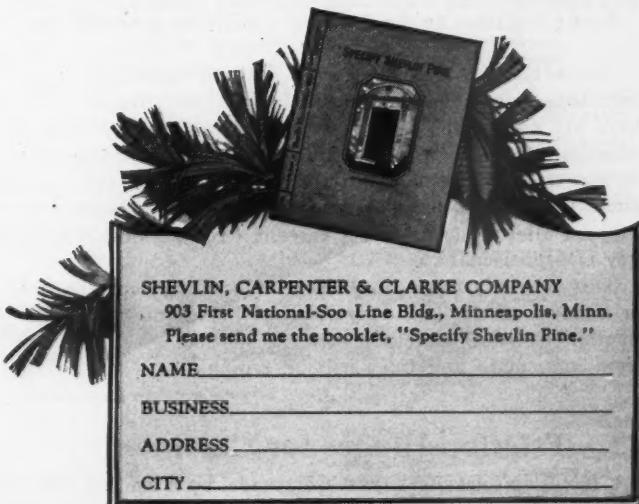
Send for Data about Pine

The thirty-two page booklet, "Specify Shevlin Pine", contains information about Pine that should be of value to you—the characteristics, physical properties, allowable stresses and other data.

The coupon below is for your convenience in obtaining a copy. Just fill it out, send it to us today and the booklet will be sent to you immediately.

Shevlin, Carpenter & Clarke Company
903 First National-Soo Line Bldg., Minneapolis, Minn.
Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.

San Francisco Sales Office: 1028 Monadnock Building.
Toronto, Ontario, Sales Office: 606 Royal Bank Building.
Sold in New York by N. H. Morgan, 1205 Graybar Bldg.



SHEVLIN PINE

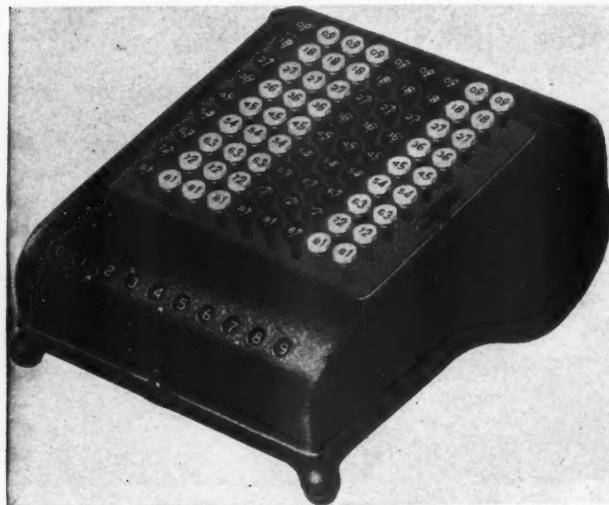
WHAT'S NEW?



EDITOR'S NOTE: *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 1827 Prairie Ave., Chicago, Ill.*

Electric Calculating Machine

A N electrically operated calculator, capable of speed beyond the skill of any human operator has recently been placed on the market. The electrical operation, it is claimed, reduces the actual physical effort on the part of the operator to a short depression of the keys. The light key touch, which is uniform for all keys, actuates the motor and the motor instantly completes the operation. This new key touch, with the motor doing the work, results in greater operating efficiency and greater production per operator, according to the manufacturers.



The Speed of This Electrically Operated Calculator Will Be Found Valuable by the Building Contractor or Architect.

Another advantage claimed for the new machine is positive key action. Errors due to incomplete strokes of the keys are impossible, as the operator cannot short-stroke or otherwise misoperate a key. The new calculator is similar in size to the company's other machines of this type. The small motor is entirely enclosed within the case and operates on alternating or direct current. It runs only when a key is depressed.

This new calculator, in 10 column totaling capacity size, is already on display, deliveries are being made and production is being increased steadily so that within a short time immediate deliveries will be possible.

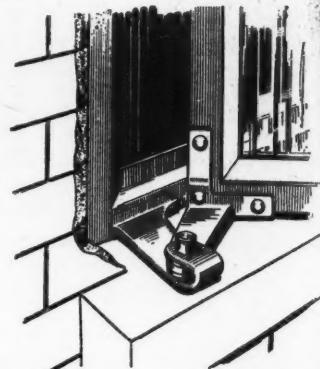


Friction Hinges for Casements

ANNOUNCEMENT has been made, by a leading manufacturer of steel casement windows, that its engineering department has developed a new type of friction hinge which makes the use of staybars and sliding adjusters obsolete on residence casement windows. By means of this hinge the casement ventilator remains at any desired point in the opening arc. Even in strong winds the

hinge friction is sufficient to hold the ventilator steady, yet a simple pressure of the hand on the ventilator will swing it at will.

This new friction hinge, which is shown in the illustration, contains a series of friction washers in the joint, so placed that the ventilator movement is retarded. Adjusters of various types are sometimes necessary when insect screens are applied to the casement opening and accordingly all this company's casement ventilators will be tapped so that these adjusters may be applied when desired. Hereafter the friction hinge will be standard construction on this company's casements and all staybars and adjusters will be classified as special.



With This Friction Hinge, Casement Windows Hold at Any Desired Position.

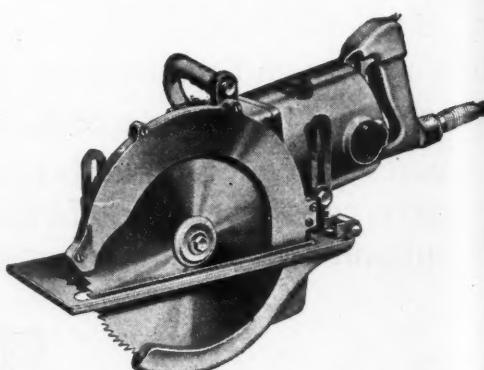


Heavy Duty Electric Hand Saw

THE new, portable, electric, hand saw shown here was primarily designed for heavy work to meet the demand for a saw with a greater cutting capacity. This new model will cut any wood up to $3\frac{1}{4}$ inches in one cut. It also cuts or scores other building material such as limestone, cement blocks, asbestos, etc. It operates from any electric light socket.

One important feature of this saw is the wide, adjustable and tilting base for bevel cuts. It will cut through rafters on the steepest roofs even though two-inch, rough lumber is used. Another feature is the approved safety guard which fully protects the operator from the saw blade.

This new saw weighs only 24 pounds, yet develops one horsepower, to rip and cut any wood neatly and accurately. It will cut 10 times faster than the old-fashioned hand saw, it is stated. This company manufactures its portable hand saws in four sizes.



Here Is a Portable Electric Hand Saw That Will Cut Any Wood Up to $3\frac{1}{4}$ Inches.

A Frame for Every
Kind of Building



Houses sell easier if *Andersen* is stamped on the window frames

Every house that pleases its owner increases the reputation of its builder.

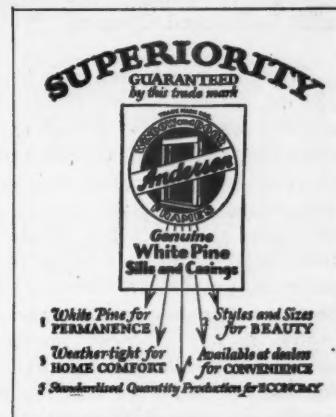
One sure way to please owners and attract prospects is to use, whenever possible, nationally advertised equipment and materials—the brands that the public knows mean superiority and permanence.

That is why it is important for you to be particular about the window frames you specify for your buildings. That is why we want to tell you how

to be sure you are getting the best kind of window frames.

The Andersen Trade Mark is die-stamped on every sill. It is our guarantee to you and your guarantee to your customers of *quality material*. The sills and casings of every Andersen Frame are made of genuine white pine, the wood that never warps or rots or splits.

Use the Andersen Frame prestige to make homes sell easier. Fill out and mail the coupon below.



Andersen FRAMES

ANDERSEN LUMBER COMPANY

Box 2112, Bayport, Minnesota

Please send me without cost or obligation the material checked in squares on this coupon.

- Set of folders describing construction and uses of Andersen Frames.
- "How to Make Your New Home More Comfortable"—an illustrated booklet of interest to all home builders.

Name _____

Business _____

Street Address _____

City _____ State _____

Name Lumber Dealer _____

Andersen Distinctive Features

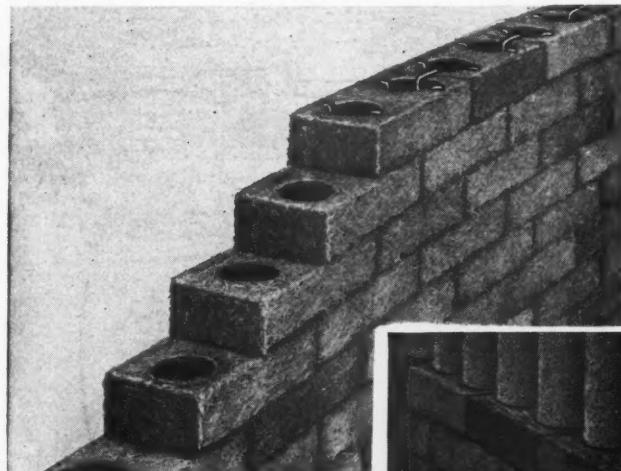
- 1 Patented, noiseless, long wearing Andersen pulleys used exclusively.
- 2 Genuine soft White Pine sills and casings—last a lifetime.
- 3 Patented, exclusive weather-tight features including groove for wide blind stop.
- 4 Absolute accuracy of milling.
- 5 A Frame up in 10 minutes.
- 6 Standardized styles and sizes, convertible for all architectural needs.
- 7 Nationally known and distributed.
- 8 Dependable because guaranteed by a reliable manufacturer.

Sold by Leading Building Material Dealers

Economical Building Units Serve as Form for Reinforced Concrete and as Wall Insulation

TWO functions are served by the building material illustrated on this page. The first is to serve as a mould or form for reinforced concrete construction. The second is to serve as an insulating material. Its use in home building under all climatic conditions, during the past five years, has demonstrated the efficiency with which it serves both of these functions.

This building material is composed of long, tough, wood fibers, fireproofed and held together by a permanent, mineral cement in the form of a block or mould. It will not carry moisture, it is vermin proof and it becomes more permanent with the years. Any plastic material will adhere to its surface so the plaster or stucco can be applied directly to it.

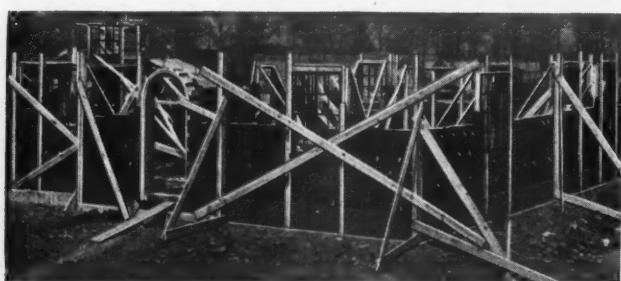


Columns of Holes, Formed by the Mould Blocks, Are Filled with Reinforced Concrete.

Although never used as a load bearing material these units are quite strong. It is stated that they have four times the strength of cork board in cross breaking and three times the crushing strength. Though the illustrations reproduced here show this material only as it is used in the construction of exterior walls, it has a large number of other applications in the building field such as the building of partitions, acoustical correction, floor construction and roof insulation.



The Reinforced Concrete Columns, Surrounded by the Insulating Material of the Moulds, Form a Strong Wall Resistant to Heat and Cold.



A House Under Construction Showing the Window Sash and Arched Doorway in Place. No expensive operations are involved.



Gables Are Quickly and Easily Constructed, the Moulds Being Cut to Proper Pitch and Then Fitted Together.



Space for Large Pipes Is Provided During Construction While Small Pipes Are Set by Raking Out a Depression.

The blocks or moulds measure 16 by 8 by 4 inches, the equivalent, in size, of eight bricks, but weighing only as much as a single brick. They are built up brick fashion but without mortar so that there are no mortar joints or cracks to be penetrated by heat or moisture. Each unit has two holes through it and these holes, when the units are laid up, form a continuous column from the top to the bottom of the wall. The openings are filled with concrete, properly reinforced, as the wall is laid up. The result is a strong reinforced construction with the form, or moulds, left in place to serve as insulation within the wall.

In addition to the moulds already referred to this material is supplied in slabs, 32 by 16 by 2 inches and 32 by 8 by 2 inches, which are used in forming concrete girders at the foundation, floor and roof lines, and about window and door openings and similar points.

Because of the resiliency of this material it is said to take up any expansion or contraction which may occur and practically eliminate all danger of cracks. Because of the excellent insulating qualities of the material, houses of which it is built are cool in hot weather and are easy



Galvanized Brick Ties Protruding Between the Moulds Are Embedded in the Concrete Columns and Tie the Brick Veneer Firmly to the Wall.



Famous quality products help sell homes

Every famous product or material that you use in the homes you build is an added selling feature. This is true of the heating plant—the plumbing. It is also true of paints, varnishes, enamels, etc.

SWP House Paint and other Sherwin-Williams finishes increase the desirability of the homes you build—*make them easier to sell*. The majority of home buyers recognize the superiority of Sherwin-Williams products. To use them is to command buyer-confidence—belief in the quality of other

materials and fixtures throughout the house.

Hundreds of builders have been using Sherwin-Williams finishes because they are economical and because they make the house look richer and more attractive. Now these men know that Sherwin-Williams quality is a wonderful selling point.

Whenever you wish the advice of a painting specialist, write our technical staff. These men are at your service. Address

THE SHERWIN-WILLIAMS CO.
601 Canal Road, N. W.
Dept. 450 Cleveland, Ohio



SHERWIN-WILLIAMS

PAINTS
VARNISHES

LACQUERS
ENAMELS

and economical to heat in cold weather. The method of construction is simple and economical.

Houses built by this system can be finished, on the exterior, in any style desired—stucco, brick veneer, siding or shingles. It lends itself readily to half timbering. The interior, too, may be finished in any manner desired. Unusual architectural effects are easily obtained with it and the eight-inch wall makes possible the beauty of deep reveals without extra expense.



Modern Heating Units

THE accompanying picture shows a room heated by a cabinet heating unit of the most modern and efficient type. This heater consists of two parts which are entirely separate, a cabinet of the finest furniture steel which can be finished to match the room decorations, and a heating unit over which it is placed.

The heating unit is a section composed of a series of flat, horizontal tubes $1\frac{1}{16}$ of an inch high and $\frac{3}{16}$ of an inch wide, running the entire length of the section and arranged in vertical tiers on 1-inch centers. These are held securely in place by copper fins, spaced five to an inch of tubing, and set perpendicular to the tubes.

This section is nested securely in bronze metal, end tanks or headers which act as manifolds for the entering heating element and returning condensation. The special arrangement and copper construction of the fins and tubes assures a maximum of heating efficiency, it is stated.



A Room Equipped with One of the Modern Type of Heating Units Which Are Not Only Highly Efficient, But Decorative as Well.

The shape and design of the tubes preclude the possibility of freezing. The tubes are coated with tin on the inside, producing a glass-smooth inner surface, eliminating the danger of corrosion and clogging.

The cabinet is set over this heating unit, but is not attached to it so that it may be lifted off for cleaning. The room air enters the cabinet at the bottom, is heated in passing through the heating unit and flows upward through the cabinet, being delivered through the grille out into the room entirely by convection. The upper part of the cabinet contains a water pan extending the full width of the cabinet and so designed that the heated air circulates over its surface providing sufficient evaporation to maintain good humidity in the room and greater comfort and health at moderate temperatures. The water pan is not fastened to the cabinet and can be removed and cleaned at any time.

These heaters are designed and constructed for use with vacuum, vapor, air line and one pipe steam systems.

Where concealed radiators are preferred, a similar heating unit can be obtained with a wall cabinet.



Spray Outfit for All Finishes

FOR applying oil paints, water paints, stains, varnishes inside or outside, this paint spray equipment meets the requirements, it is claimed. Further, it is said, that it enables contractors to save four-fifths of the time and labor required by even the most expert brush work. It is very compact and may be had either mounted on a truck as shown in the illustration or without the truck. The truck is sturdily built of steel with a convenient handle and big broad tread iron wheels. The outfit may be removed from the truck at any time by simply removing four bolts.

The powerful, yet economical gasoline engine, insures absolute independence of local current supplies or high test gasoline shortage. It is built directly into the twin cylinder compressor and, with an ample reserve tank, assures a dependable air supply at all times.

Silent, spiral, bevel transmission connects the engine and compressor. There are no belts or chains. This outfit is guaranteed to operate two large guns continuously.

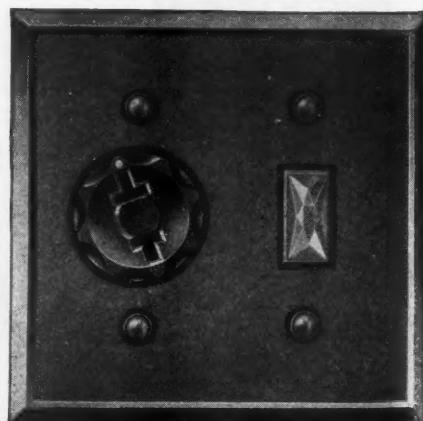


A New Electric Device

THE accompanying illustration shows a new development in electrical equipment in the form of a combination switch-tap and pilot light in a duplex plate. In the one unit is combined a switch, an outlet and a signal light. A two-gang box takes the whole device, thus affecting a worth-while saving.

This unit is adaptable for appliances, radio and remote control lights. It comes in two styles. In the one adapted to appliances and remote control lights, a quarter turn of the finger grooved outlet controls the remote lights and the jewel warns when the lights are on. The "Tee" slot outlet is independent of the switch and is always alive, ready for appliances.

In the style adapted to appliances and radio, the "Tee" slot takes the radio or appliance attachment plug, the finger grooved outlet controls the current to the "Tee" slots and the jewel warns that the current is on.



Here Is a Single Electric Unit in Which Are Combined a Switch, an Outlet and a Signal Light.



This house at St. James Wood, Piedmont, California, illustrates the pleasing effects easily obtained by the use of Johns-Manville Asbestos Shingles. Architect—Miller and Warecke, Oakland, Cal. Roofing Contractor—General Roofing Company, Oakland, California.

Profits are Greater, Sales Quicker with Johns-Manville Asbestos Shingles

THE Johns-Manville national advertising campaign is seeking out the prospective house builder in your neighborhood. It will give him new information about the importance of roofs. It will help him to choose his roof from materials that will provide safety from fire, permanent beauty, and long wear. To the prospective house builder, Johns-Manville

Rigid Asbestos Shingles mean that the house is well built from top to bottom.

Try Johns-Manville Asbestos Shingles on your next job, and let them help you sell your houses. Send the coupon for full information concerning the way in which Johns-Manville Rigid Asbestos Shingles have been successfully used by builders everywhere.



MASTER of ASBESTOS
Johns-Manville
Rigid Asbestos Shingles

JOHNS-MANVILLE CORPORATION
New York, Chicago, Cleveland, San Francisco
Branches in all large cities
Canadian Johns-Manville Co., Ltd., Toronto

(Mail this coupon to branch nearest you)

Please send me information about using
Johns-Manville Asbestos Shingles on houses
built for sale.

Name.....

Address.....

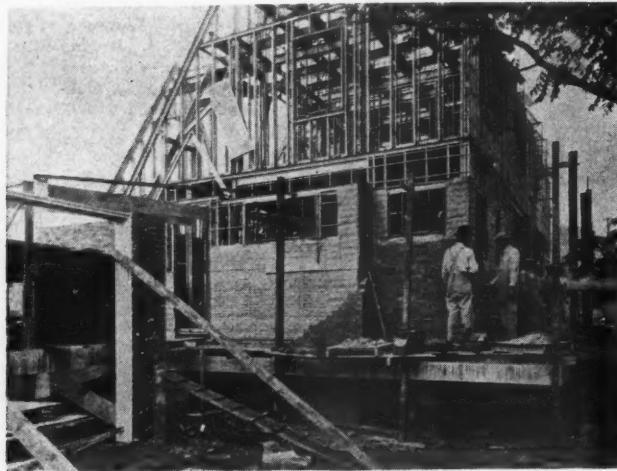
City..... State.....

R-3-12

Steel Windows in Steel Frame House

NATIONAL interest in the model steel frame house now nearing completion in Pittsburgh has been aroused not only by the possibilities of reduced costs from the use of steel materials but also by the promise of large savings in labor payrolls. Louis Brandt, noted housing engineer, in a recent address before the Better Home Builders' Association, at Columbus, Ohio, pointed out that field labor in the construction of a house represents upward of 45 per cent of the total cost and that, to guard against unproductiveness of labor, men should be hired on a basis of normal output.

In connection with the model steel frame house, Mr. Brandt says that because a large part of the work on the materials has been done in mill and shop, and because the



The Cost of Installing the Steel Windows in This Model Steel Frame House Was Even Less Than in the Conventional Frame Building.

units are larger and lay up faster, and are more simple to assemble by men having a little experience, the amount of labor time is very materially reduced. In addition, the normal labor output per man can be easily fixed and actual productiveness checked.

The windows used in the model steel frame house are of a well-known steel casement type. Reaching the job complete, with swing leaves hung and hinged in the frames, and with a priming coat of paint already applied, these windows are lifted into the wall openings and quickly anchored in bucks. The cement backing of the brickwork makes them weathertight, and future caulking is necessary. According to Mr. Brandt, the cost of installing windows in the steel frame house is much less than it is even in the conventional frame building.



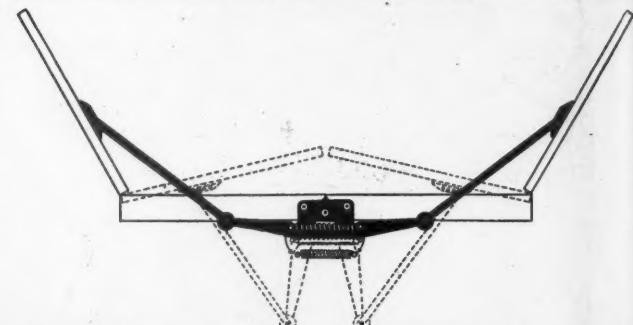
Positive Control of Garage Doors

HERE is a garage door control which is inexpensive and can be easily and quickly installed on any garage having outside swinging doors, but which will prevent the swinging, banging and slamming of the doors in any wind, will hold them wide open when they should be opened and keep them shut when they should be shut. This control automatically opens both doors when you pull either door open and automatically closes both doors when you push either door shut. It fits doors of any width.

This control eliminates the bother of continually getting out of your car to re-open doors while driving in or out of the garage and prevents possible damage to fenders or finish from slamming doors. It also eliminates one of the dangers of monoxide gas poisoning because the doors

of the garage cannot blow shut while you are working on the car with the engine running or warming up.

Installation requires merely the driving of three lag screws and four carriage bolts. Once installed the control can be forgotten, it requires no oiling or greasing, and will last a lifetime, as it is of all metal construction. It comes



Outswinging Garage Doors Are Completely Controlled by Means of This Simple Inexpensive Equipment.

completely assembled ready for installation, and takes about twenty minutes to install. It is not affected by rain, snow, ice or wind.

This control consists of channel iron arms which are attached to the tops of the doors and operate on pivots from two segment gears. A sturdy steel spring is attached to the arms so that it oscillates from front to back of the axis of the segment gears. The tension of this spring comes into play either in front or in back of the axis. In other words, when you want to open or close the doors, you push or pull one door until the spring moves past its "hump" or point of greatest tension. From then on the spring takes up the load and opens or closes the doors automatically and holds them in position.



New Rule Simplifies Estimating

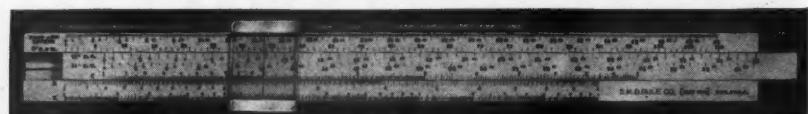
THE illustration shows a new estimating rule which should prove of value to builders by eliminating guess-work and errors and making difficult calculating easy. It is used to take off rapidly quantities of lumber from plans; to find the area of surfaces rapidly, by logarithmic scales; to obtain the cubical basis for any given dimensions quickly and to save time on all calculations.

This rule has 11 different scales. Three of these are logarithmic scales and eight are equally divided scales for finding the number of joists, boards, flooring strips, etc. The operation of the rule is simple. By sliding the glass indicator to the necessary dimension the exact number of joists, boards, etc., are instantly found.

The main scale is a foot and inch scale, that is, $\frac{1}{4}$ inch equals a foot and each $\frac{1}{4}$ inch is divided into 12 equal parts, representing inches. This may be called a log, and from this log all the various items of lumber are determined. Six of these scales are also marked for use when taking dimensions direct from plans.

Six-inch and four-inch lumber may be exactly determined without adding any waste as the fact that they are dressed down to smaller size is already taken into consideration on the rule.

Two auxiliary marks on the rule for checking lumber lists are an added convenience and by the use of these marks the exact amount of lumber required in any size building can be determined by one simple operation.



This New Rule Makes the Calculation of Lumber Quantities from Plans a Simple, Quick Job.

1928
ng on
e lag
ntrol
l will
omes
d by
about
now,
are
from
ed to
axis
into
ords,
pull
nt of
the
olds

HoltBid

*Figures Costs
Easily*

Spend Less Time —Estimating—

Use the Modern Up-to-Date HoltBid Service Method

Copyrighted and patents pending

A building starts with an estimate. An estimate means tedious hours of labor, trying to anticipate the cost.

Figuring, checking, counting. Listing dimensions, pieces and prices. Countless chances for mistakes and omissions.

Uncertain of this and doubtful of that.

Is the bid too high? or, Are my costs too low?

The relief from all this grief is HoltBid.

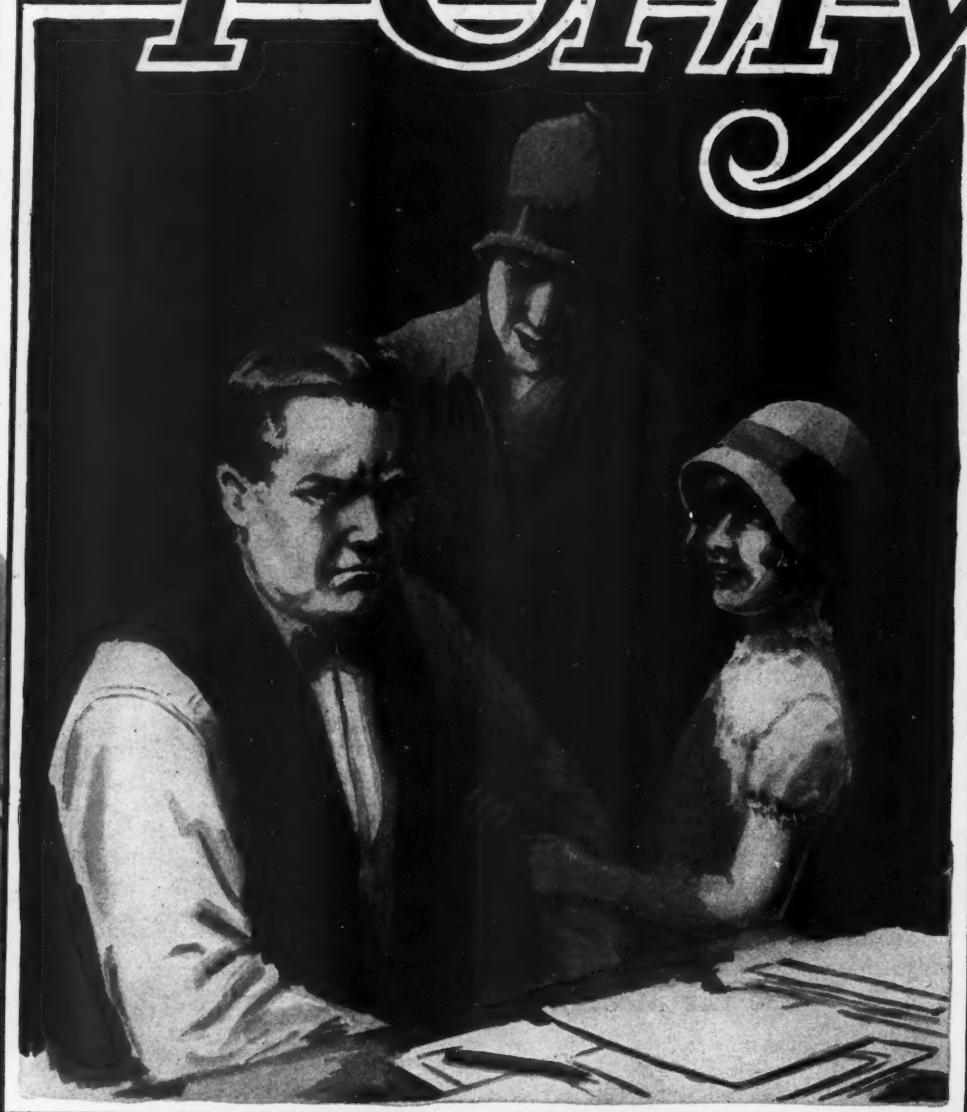
No long tiresome hours with Holt-Bid system. Simple, easy to use and absolutely accurate.

Can be applied in eight hours. No study, no problems in mathematics or rules to memorize.

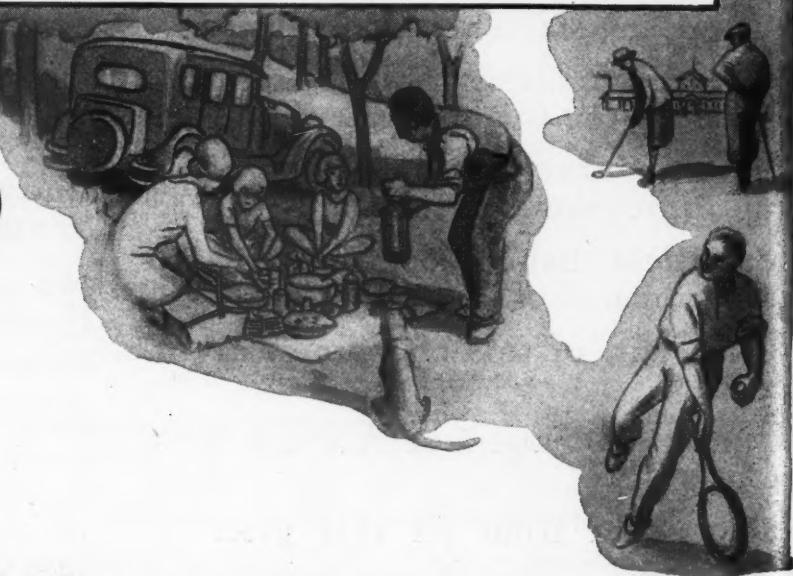
No complicated specifications. HoltBid is complete—Includes all structural material and labor costs.

HoltBid will give accurate building costs on Homes, Apartments, Flat Buildings, Stores, Barns, Garages or any other ordinary building in less than an hour.

"If Only"



HOLTBID
*solves
estimating
problems
in a hurry*



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

"had time"

That's a Poor Excuse

*When **HOLTBID** will take care of your estimating and leave time for recreation*

There is time for enjoyment when you use the HoltBid method for figuring your costs. You can add extra hours to your day.

Think of it! One third of your time to spend as you like without injury to your business. Only 30 to 50 minutes are required to estimate ordinary buildings.

There is no need to spend your leisure hours getting out estimates for "hurry-up" prospects. With HoltBid you can save from three to five hours on every job you figure.

You owe it to yourself to use HoltBid. The tiresome evenings spent over material lists and specifications are wasted. These could be your

"play time" hours and still you could make more money—do more business—if you were a HoltBidder.

HoltBid enables you to make a detailed accurate

bid in a fraction of the time it requires to figure the same total by the old methods of estimating.

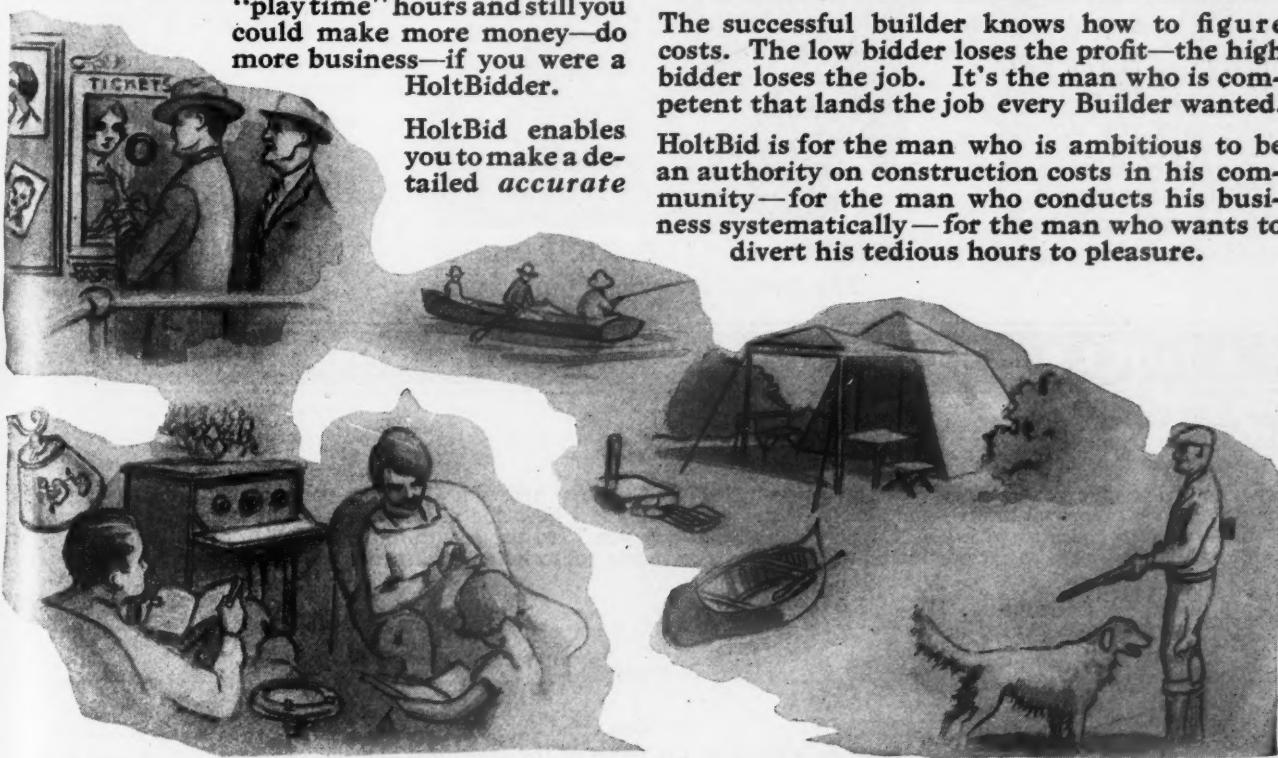
It also enables you to change your bid in a few minutes if the customer wants to alter the original plans or selects an entirely new plan.

HoltBid will give you unsurmountable advantage over competitors—it will save your time—it will save your money—and it will banish the uncertainty that goes hand in hand with every bid.

HoltBid will enable you to get the bigger—and more profitable job. HoltBid will increase your ability to discuss building problems—clients will come to you more and more for consultation.

The successful builder knows how to figure costs. The low bidder loses the profit—the high bidder loses the job. It's the man who is competent that lands the job every Builder wanted.

HoltBid is for the man who is ambitious to be an authority on construction costs in his community—for the man who conducts his business systematically—for the man who wants to divert his tedious hours to pleasure.



HoltBid

Sent for Only
\$ 1 00



My Personal

I GUARANTEE that the HoltBid Method of Estimate Building Costs will be satisfactory to you in every respect. All I ask is that you give it a fair trial, and that is the only condition. If at the end of thirty days you do not find the HoltBid Method exactly as represented, I will refund the small down payment you have made.

WILLIAM A. RADFORD, President
The HoltBid Service Company

Guarantee

During the thirty days of free examination it is understood that our corps of expert HoltBidders will hold themselves in readiness to answer any question, and to give you true appreciation of the great value of the HoltBid Method. In accepting your order I place my full confidence in your intentions to give the HoltBid Method a fair trial.

PIN A DOLLAR BILL TO THIS COUPON AND MAIL TODAY

William A. Radford, President,
HoltBid Service Company,
1827 to 1901 Prairie Ave., Chicago, Ill.

I would like to give your HoltBid Method a personal trial. I enclose herewith \$1.00 that you may send me the complete service on 30 days' approval under your money-return guarantee. If I keep the material more than thirty days it is understood that I wish to continue with HoltBid Service and will pay you \$5.00 per month until the full price of \$85.00 has been paid. The shipment I am to receive includes all units and a year's subscription to American Builder.

Name

Town State

Street Address..... Occupation

Note:—The service must be entered in the name of the individual and not the firm.

A.B. 12-28

(Without the American Builder, we shall deduct \$1.00 from the total purchase price. If you already are a subscriber, we can readily extend your subscription for a year.)

Utility Saw With New Features

A NEW utility saw recently patented and now being offered to the public, differs substantially, it is stated, both in design and construction, from other machines of this type now being sold. The quadrant or swivel block in this new machine is also a hinge block which causes the table to tilt parallel with the guides, regardless of which end is elevated. This feature is distinctive.



This Saw Is Said to be Quite Different from Other Machines of Its Type Due to Its Latest Improvements.

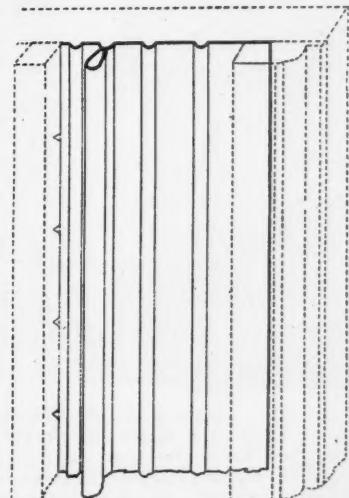
place of joiner knives for making any straight moulding.

The table can be elevated at both ends, making possible work with the table level or tilted. The table can be tilted to any desired angle with the side of the saw blade and still remain in perfect alignment with the saw blade, irrespective of the angle of inclination at either end of the table. The guides are mechanically correct and in perfect alignment with the saw blade at any elevation or any regular relation of the table to the saw blade.



Metal Weatherstrips Improved

THE illustration shows an improvement in metal weatherstrips of the rib type whereby quicker installation can be made. This is accomplished by means of a saw tooth extension on runway strips which enter the parting stops, doing away with the tedious job of kerfing or nailing and holding the strip in the proper place. It is said that this has a decided advantage over the old method and is already gaining popularity. The manufacturers state that installers can do 25 per cent more work by this method, making it quite economical.



Quicker Installation of This Rib Type Metal Weatherstrip Is Made Possible by a Saw Tooth Extension.



Kalamazoo to Hold Home Show

THE Kalamazoo, Mich., Real Estate Board, at a recent meeting decided to hold its Fifth Annual Complete Home Show some time early in 1929, probably in February, as in the past 10 years. The coming show promises, on the basis of inquiries and other indications, to surpass any previous show sponsored by the Kalamazoo Board.

THIS IS
PATTERN
No. 621

HANGS LIKE
WALL
PAPER



Oil-Texd

New—
Permanent—
Textured—
Wall Covering
Most Serviceable
Decoration Obtainable

Washable—Decorative—Easily Applied—Inexpensive—Built up in Linseed Oil—No Surface Cracks—Easily Repaired—Can be removed, permitting any other type of decoration.

The wall is finished in one operation without smudging the woodwork and a uniform texture is assured. Applied to any smooth surface like wall paper.

Made in any color and in a variety of designs suitable for any room in the home, public hall, stores, etc.

FREE SAMPLES and literature sent upon request.

← Width of Roll 19 $\frac{1}{2}$ Inches Trimmed →

PRODUCT OF

Lincrusta-Walton Co.

Hackensack

New Jersey

Ornamental Iron Work

Plays an Important Part in the Design of Handsome Modern Homes

UNTIL quite recently ornamental iron work has been a much neglected medium for the achievement of beauty and utility in this country, but the modern trend in building and home design shows a new appreciation which is very rapidly taking hold of the whole country.



Grace and Sturdiness Are Combined Most Successfully in the Wrought Iron Terrace Railing of This Washington Highlands Residence in Milwaukee, Wis.

Europe has for many years, in fact for centuries, made extensive use of ornamental iron work and the cities and hamlets of Europe are full of carefully preserved examples of this art. An authority on the



Ornamental Iron Is at Last Receiving Its Proper Recognition in This Country. An example of the excellence of American ornamental iron is seen in this wrought iron door grille and railing produced by the Badger Wire & Iron Works for the residence of Dr. Tainter, of Milwaukee, Wis. A. C. Sehrt Co., designers and builders.

subject, writing about the ornamental iron work of Germany, recently said:

"The truth is that Germany is hardly second to Italy, and easily superior to France, in the variety and individuality of the treasures it has to show the tourist. One finds perhaps more impressive, graceful or charming, beauty in the small towns or hamlets than in the large cities, and so I should like to tell the ones who have the urge to travel to get off the highways and visit the byways.

"It is surprising how much, quantitatively, Germany has to offer in ornamental bronze and iron work, ancient and modern, and it is at times touching to know what care is expended to preserve particularly the ancient work. I had occasion to watch the repair of the railing around the fountain at the Roemer in Frankfurt. Rather than make entire sections new, as much as possible of the old railing is preserved and pieces are spliced and riveted or welded in place with the utmost care and the new work is given the appearance of the old by hammering, forging and heating."

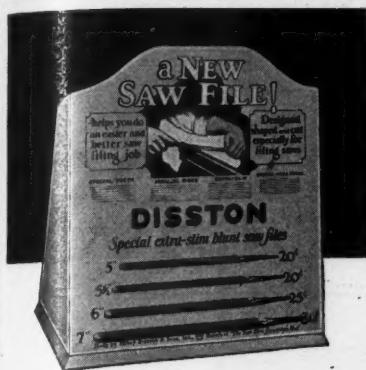
This indicates clearly the appreciation of this type of art which thrives in the older centers where time is taken for the full appreciation of beauty and the building industry has not been swamped with the purely utilitarian task of providing sufficient space under pressure of meeting imme-



Nothing Could Harmonize More Completely or Be More Serviceable Than This Beautiful Wrought Iron Balustrade Railing in the Gordon Osborn Residence at Sheboygan, Wis. C. W. Weeks, architect.

diate needs.

But a new period has arrived in American building activity. No longer do we allow the pressure of absolute need to dominate. It is not necessary for those who would find beautiful ornamental iron work to go to the older countries of Europe. Today our American manufacturers are producing ornamental iron work which rivals, if it does not surpass, the finest to be found in Europe. The American public has discovered ornamental iron and the designer and builder who would keep in step with progress must give it constant consideration.



You will want these new Saw Files

YOU want saw files with the right bite, cut and steel—files of Disston quality.

But never until now have you been able to get files such as the new Disston Special Extra Slim Blunt Saw Files.

No taper, but the same thickness from tang to end, giving a level, uniform stroke.

File "finds its bearing" against the tooth more quickly; extra slim, so you can see just where and how the file is cutting.

Special cut, with plenty of bite, which cuts smoothly, lasts longer.

Made of the same tough Disston Steel that Disston puts into the files used in filing Disston Saws.

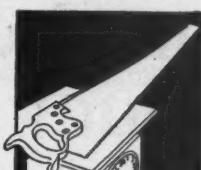
Your own test will prove to you that these new Disston Files will outwear two ordinary files. You can get them now at the store where you buy your Disston Saws.

SEVEN LIGHTWEIGHT SAWS IN THE NEW DISSTON LINE

... and Eight Regular Pattern (Standard Width) Saws

GREAT improvements have been made in hand saws. DISSTON has made them!

You will realize how much these improvements mean to you, as soon as you go to a hardware store and take a new Disston Hand Saw in your hand.



Lighter blades, thin yet stiff, which cut faster, run smoother, and save your strength at every stroke. Made lighter by Disston true-taper grinding, which removes all unnecessary weight without making the saw limber. You get a thinner blade, with better clearance, better balance—a blade stiff and sturdy, with tough temper, perfect tension and the "hang" and "feel" that only Disston can put into a hand saw.



You get new beauty in a hand saw: a higher polish, a finer finish. Handles of new design, with larger hand-holes and with the new Disston weatherproof finish.

Choose your next saw from the seven new Disston Lightweight (slip) patterns or the eight new Disston Regular (standard width) patterns.

HENRY DISSTON & SONS, Inc.
Philadelphia, U. S. A.
Canadian Factory: Toronto

D-15 Lightweight
Straight Back

D-12 Lightweight
Straight Back

D-23 Lightweight
Straight Back

D-20 Lightweight
Skew Back

D-16 Lightweight
Straight Back

D-8 Lightweight
Skew Back

D-7 Lightweight
Straight Back

DISSTON

"THE SAW MOST CARPENTERS USE"



You'll like this new Disston Pocket Level

IT is the Disston A-10 Featherweight—length 9 inches, weight only 2 ounces—the lightest and handiest little level on the market.

Made of the same aluminum alloy

as used in airplanes. Top plate polished. Body black rubberoid finish. Etched lines on level glass and on two plumb glasses are proved and guaranteed accurate. Your dealer can supply it.

MOTOR TRUCKS *and* TRAILERS



Some Pointers on the Care of Motor Trucks

PROBABLY the best explanation that can be given as to the care of a truck would be a comparison with our own daily lives.

We all know—or should know—that our personal health is largely a matter of resistance. Systematic eating, enough rest, and the right kind of food keep us in good physical condition. A motor truck needs systematic lubrication, humane treatment and good lubrication oil as much as we need the things just mentioned.

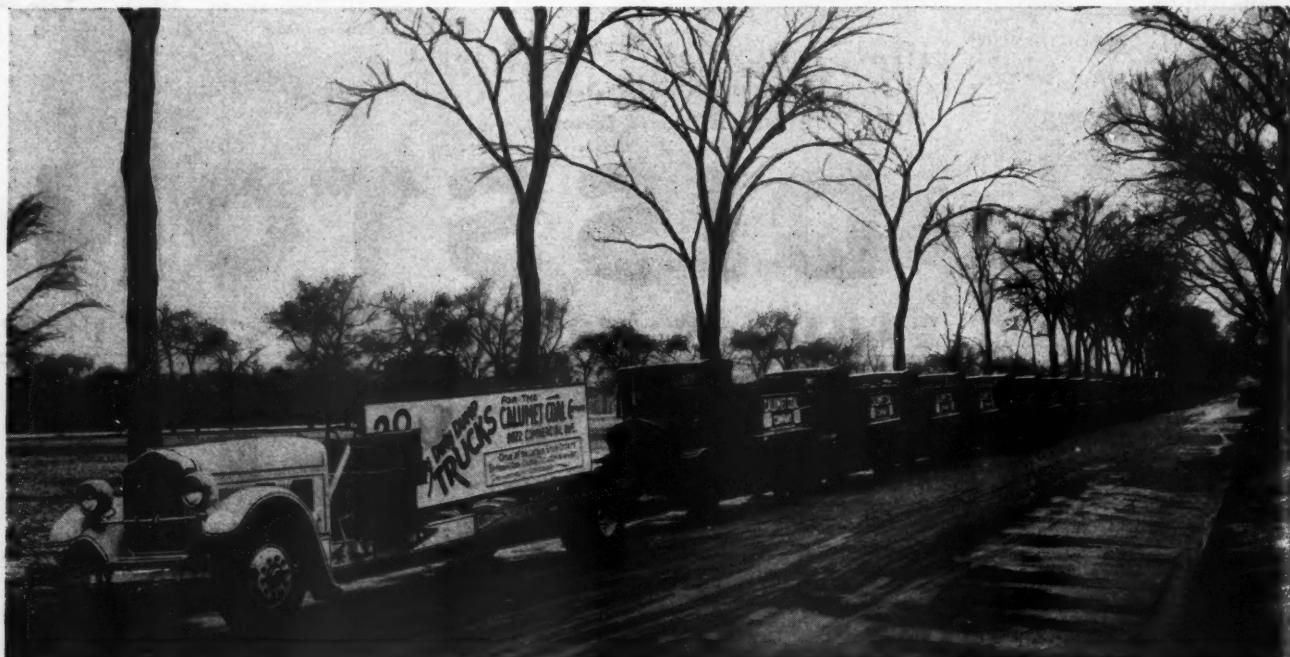
We all take extra precautions against seasonal conditions. And a motor truck needs the same kind of care, a sort of readjustment and general tuning up to meet the different climatic conditions. Most of us are pretty careful not to overwork ourselves or to attempt to carry more work than nature has provided us with facilities for shouldering. We need to keep within our bounds of capacity and so does a motor truck. We can keep on overloading a motor truck just the same as we can keep on overloading ourselves with work, but sooner or later there's going to be a heavy doctor's bill, to say nothing of a protracted sojourn to the repair shop. And if there comes a time when an emergency demands that we take on more work, we know, or,

that is, we should know, that we have to take care of ourselves accordingly if we are to expect the wheels to keep on turning.

Then again, there is that element of good old common sense plus a certain knowledge of "what makes the wheels go around." Now, the majority of people have at least a smattering of knowledge on the subject of anatomy and medicine. If we know the preventatives of illness and apply them conscientiously we may avoid serious complications. And the same thing holds true if we know what to do when symptoms of illness appear.

For instance, when we get a cut or bruise, we apply an antiseptic, or when we feel the symptoms of a slight cold, we prescribe a corrective for ourselves. But when something of a serious nature develops, we know that it is far better to call in a physician, or specialist. The point is, however, and this applies to motor trucks, too, that we must know something about the physical makeup in order to be able to recognize symptoms, to know whether they represent small or serious troubles, and to take care of them if they are small ones.

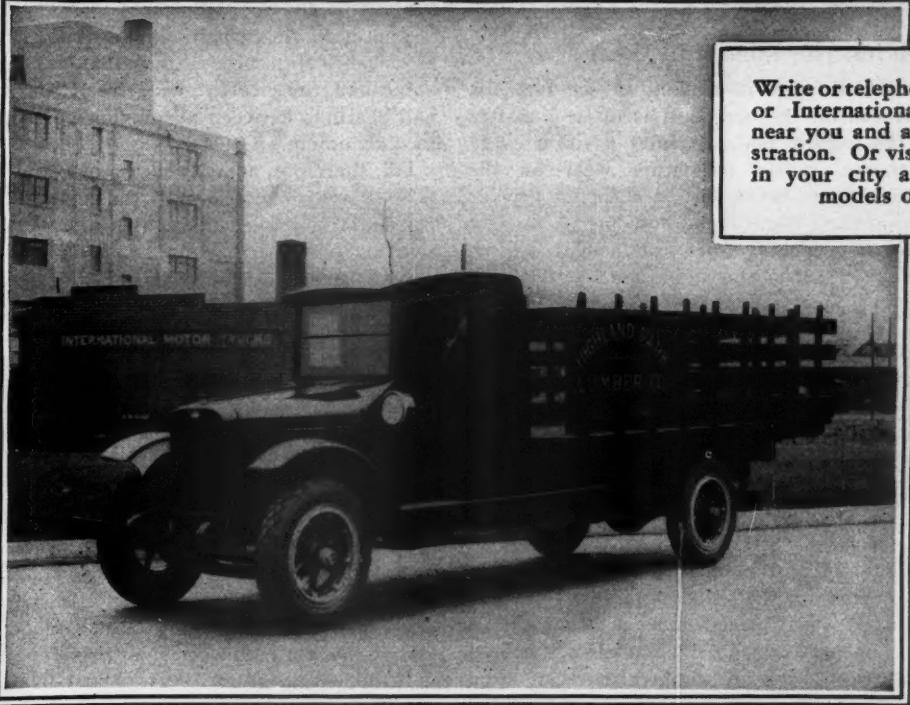
Doesn't it seem, therefore, that every man who is en-



Thirty New Trucks, of One Make and Model, Were Recently Delivered to the Calumet Coal Company, of Chicago, for the Delivery of Building Materials and Coal and for Road Building, in Accordance with a Policy of Standardization for the Purpose of Economy.



The International line of Speed Trucks offer a wide choice of bodies and equipment. Each body is designed to contribute the utmost in service, appearance and utility.



Write or telephone to the Branch or International Truck dealer near you and ask for a demonstration. Or visit the showroom in your city and examine the models on display.

Announcing Important Improvements in INTERNATIONAL Speed Trucks

{4-Wheel Brakes Now on Every Model for Safety}®



Always in the front rank in truck engineering, the International line of Speed Trucks is now offered with important improvements throughout, in design and construction.

Greater economy in operation, roomier bodies, new cabs, greater driving ease, fuel and air cleaners, longer and stronger frames. The same reliable spring suspension as before, and four-wheel brakes on every model! One of the examples of International advanced engineering

is the Six-Speed Special—the only Heavy-Duty Speed Truck built with 6 speeds forward and 2 reverse.

Capacities range from $\frac{3}{4}$ -ton to 2 tons, and all $\frac{1}{4}$, $\frac{1}{2}$ and 2-ton models are available with either 4 or 6-cylinder engine. There are bodies for every kind of work a truck must do, from economical excavation to delivery de luxe. There is speed for good going, plenty of power for bad, and sturdy stamina to stand up under every load. Trucks easy to ride and drive, easy to look at, easy to like!

And every International Speed Truck is all truck—not a rebuilt passenger car in the line. Every one of them is built for work—and famous for it. And they are better trucks now than ever!

These NEW-Improved models now on display!

THE SPECIAL DELIVERY is a speedy and sturdy $\frac{3}{4}$ -ton truck, of 124-inch wheelbase, and admirably adapted for most any light-haul requirement.

THE SIX-SPEED SPECIAL is a 1-ton job with 6 speeds forward and 2 reverse. A speed for every need: power for every emergency.

Model S is a general-purpose truck for regular hauling and delivery of $\frac{1}{4}$ -ton loads. Supplied with either 4 or 6-cylinder engine.

Model SF-34, 4-cylinder, and Model SF-36, 6-cylinder engine. Both of $\frac{1}{2}$ -ton capacity.

Model SF-46, 2-ton capacity, with 6-cylinder engine and 4 forward speeds.

Models SD-44 and SD-46 (4 and 6-cylinder). Heavy-Duty Speed trucks, especially designed for dump and trailer work. Four-speed transmission and cantilever rear springs.



In addition to the Speed Trucks, the International Line also includes Heavy-Duty trucks ranging from $\frac{1}{2}$ -ton to 5-ton sizes, Motor Coaches, and McCormick-Deering Industrial Tractors. All are sold and serviced by 169 Company-owned branches throughout the United States and Canada, and dealers everywhere.

INTERNATIONAL HARVESTER COMPANY

606 So. Michigan Ave. of America [Incorporated]

Chicago, Illinois

INTERNATIONAL
HARVESTER
COMPANY

rusted with the care of a motor truck, representing a large financial investment, should learn at least the fundamentals of its operation?

Balancing the Load and Wear

It is important to take care in loading to see that the load is evenly balanced on the body. It is often a matter of habit to place the load in one particular position every time which, of course, causes premature wear on the chassis at that point. It is always best to place the greater part of the load toward the front of the body.

Perhaps you have noticed that most trouble with spring, axles, wheels, tires, etc., is on the right hand side of the truck. This is because most roads slope on the sides, and, since it is necessary to keep to the right in driving, the right wheels are caused to ride on a lower plane than the left wheels. It is well, for this reason, to take advantage of the full road in open stretches where it can be done with just consideration for others, and to give particular attention to adjustments and general care of the right hand side of the chassis.

Lubrication

A better understanding of the importance of lubrication can be gained by considering that even the finest steel, polished up to a mirror finish, if placed under a strong microscope, will show thousands of jagged points like the teeth of a saw. When two pieces are rubbed together, these teeth lock with each other. They are ripped out, twisted, and others are pulled into their places.

Something must be interposed between the surfaces to keep them from tearing each other to rack and ruin. And that something is oil. Oil not only fills up the thousands of minute depressions, but it actually interposes a film between the two surfaces. The moving parts of an oiled

machine do not rub against each other, but against sides of a thin film of oil which keeps the jagged teeth from coming in contact with each other.

The molecules which compose oil are perfect globes. So, as a lubricant, oil not only has the advantage of being liquid and, therefore, flowing freely, but it practically places ball bearings between all moving parts and reduces friction to a minimum.

Oil, therefore, actually wears out, and it is for this reason that the crankcase and transmission must be drained, cleaned and refilled at regular intervals. To mix good oil with old oil is just about as effective as to take four dead or partly dead dry-cell batteries and hook up one good one in the center.

When the truck is operating full time, it is best to drain the crankcase regularly once a week. Transmissions should ordinarily be inspected at least once a month and oil added if necessary. At yearly intervals, it is well to drain the transmission thoroughly, wash out with kerosene and refill.



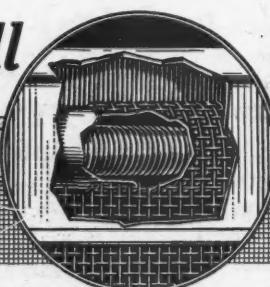
A Fleet of Thirty New Trucks

ONE of the largest orders in the history of highway transportation in Chicago was completed recently when simultaneous delivery of thirty heavy duty dump trucks was made to the Calumet Coal Company.

Led by an escort of motorcycle patrolmen, the trucks left the factory branch for a twenty-five mile parade through the industrial region of the city, later to pass in review before executives of the Calumet Company at their main office.

All the units in the fleet are of one make and model. Ten are to be used for road building, and are equipped with batch dump bodies. The others have been put to work hauling coal and building materials.

You'll



be interested in this

A New
and
Improved

ROLLING
SCREEN
!

Backed by thirty-five years of specialized experience in the screen industry, the Higgin Organization has now developed a Rolling Screen that operates satisfactorily under all conditions.

Up or down it glides—swiftly—quietly. As convenient as your window shades! Winter storing eliminated. No painting. No trouble. Ultra-modern home equipment—for the first time made thoroughly practical and amazingly serviceable!

What a selling point for the homes you build! Your clients naturally prefer rolling screens. And now you can give them the best on the market—at little or no extra cost to yourself!

Mail the coupon now for our illustrated booklet and complete information.

HIGGIN
ALL METAL
SCREENS

The Higgin Mfg. Co.
502 Washington Ave.
Newport, Ky.

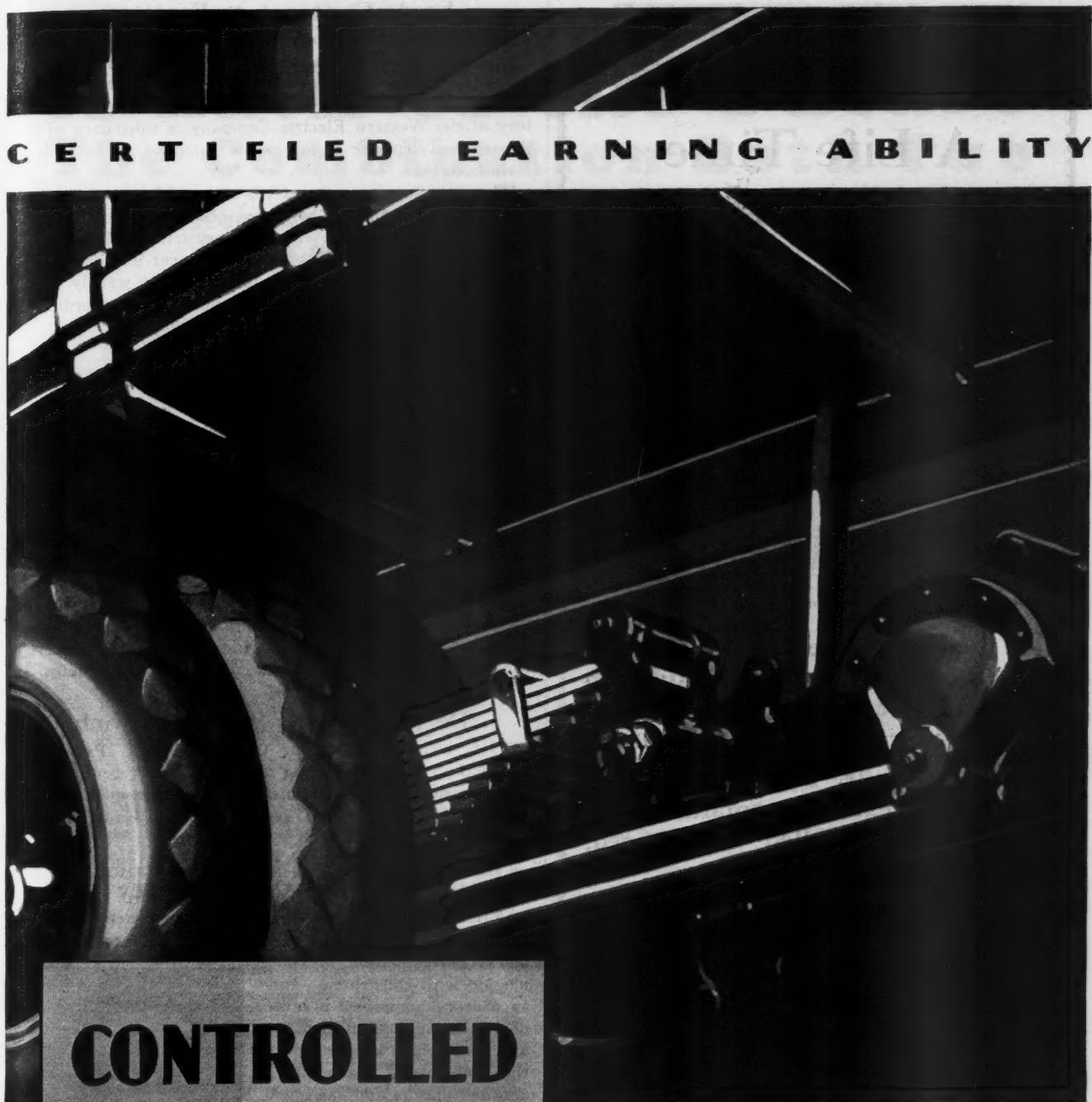
Please send complete information regarding your new rolling screen.

Name _____

Street _____

City _____

State _____

sides
fromSo,
being
places
ctionSeason
ained,
d oil
dead
gooddrain
should
added
in the
refill.highway
when
truckstrucks
ough
view
mainmodel.
ipped
ut to

CONTROLLED HAULAGE COSTS

THE one big idea that has dominated the Federal organization during its entire eighteen years of growth is this: That scientific study of haulage problems and scientific control of haulage costs offer greater economic possibilities than any one thing in the world's industry today.

FEDERAL has developed a simple and certain method for the control of haulage costs which will be mailed free to any business man. It takes the guess-work out of transportation. Regardless of how many or what trucks you use, it will effect savings. Ask for the Federal System of Haulage Cost Control.

It was to make such control possible to every branch of industry that Federal has developed the complete haulage service now offered. Forty-three chassis; more than 100 body and chassis combinations; exactly the right truck for every job, and every truck ALL TRUCK. These are the factors that have made all industry conscious of Federal's CERTIFIED EARNING ABILITY and of Federal's relation to business economy.

THE FEDERAL MOTOR TRUCK COMPANY, 5842 Federal Ave., DETROIT, MICH., U. S. A.
"Leading Specialists in Commercial Transportation"

FEDERAL TRUCKS

ALL SIZES—FOURS & SIXES

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Cabot's

A Life Time House



Residence at Rosemont, Pa. The roof of this beautiful house is insulated with Cabot's Quilt for winter warmth and summer coolness.

A life time house must be made of life time materials. The insulation must be rot-proof, vermin-proof, moisture-proof and fire-resistant.

Cabot's Quilt, built into houses over thirty years ago, remains just as it was when installed—unchanged, clean, effective.

If you are building for permanence,

Specify

Cabot's Quilt

Time Tested for over 30 Years

Send in the coupon (Roll of Quilt) below for full information

Quilt

→ **QUOTATION COUPON** ←
Samuel Cabot
Incorporated

141 Milk Street, Boston, Mass.
Offices also at NEW YORK, CHICAGO, PHILADELPHIA,
KANSAS CITY, LOS ANGELES, SAN FRANCISCO,
MINNEAPOLIS, PORTLAND, AND SEATTLE

Gentlemen: Please send me your **QUILT BOOK**.

[Write your name and address]

AB-12-28

Large Contract to Ferguson

ONE of the largest building and engineering contracts to be awarded a single company has been let to the H. K. Ferguson Company, Cleveland, Ohio. This contract is in connection with the \$15,000,000 telephone cable factory of the Western Electric Company, a subsidiary of the American Telephone & Telegraph Company, to be built at Baltimore, Md.

The company has secured 125 acres of land upon which building operations will begin as soon as title to the property has been conveyed. Initial construction will be a unit composed of plant buildings and equipment for the production of 110,000,000 conductor feet of cable weekly. The unit will be completed toward the end of 1929, according to expectations, and will employ 1,600 workers.



Ruddon Receives Appointment

M. L. PULCHER, president of the Federal Motor Truck Company, has announced the appointment of R. W. Ruddon, first vice-president and general manager of that institution. Mr. Ruddon entered the Federal organization 15 years ago as secretary to Mr. Pulcher. In 1918 he became assistant secretary; in 1924, assistant general manager, and early in the present year, first vice-president. During the past few years especially his work has largely centered about the financial affairs of the company which, under a conservative policy of expansion, has grown to its present proportions without addition to the capital investment of \$100,000 subscribed by its founders. The concern's growth has been financed in its entirety out of earnings.



De Walt Opens Detroit Branch

THE DE Walt Products Company, Leola, Pa., manufacturer of woodworking machinery, has recently established a direct factory branch and warehouse in Detroit, Mich., at 7 W. Davison avenue. H. B. Franklin is in charge of the new branch.



Houghton Joins Agency

FREEZE-VOGEL-CRAWFORD, Inc., have appointed Richard D. Houghton as director of field research and market investigation in connection with construction and agricultural equipment in both domestic and foreign markets and his intimate knowledge of the problems of manufacturers, distributors and salesmen should prove valuable to the agency's clients in this field.

Mr. Houghton's experience includes four years as salesman, sales-promotion manager and Boston district manager for the Koehring Company, manufacturers of concrete mixers, pavers and power shovels; a like period with the Leach Company of Oshkosh, Wis., as sales manager, and three years as export manager of the Trackson Company, Milwaukee, manufacturers of tractor equipment. In the latter capacity Mr. Houghton built a world-wide distributing organization for Trackson Products.

In addition to his research work Mr. Houghton will contact dealers and distributors representing the clients of Freeze-Vogel-Crawford, Inc., for the purpose of assisting them with their merchandising and sales promotion activities.



Richard D. Houghton has joined Freeze-Vogel-Crawford, Inc.

A Bath of the Future The Combination Bath Tub

Regular Bath, Shower Bath, Seat Bath, Foot Bath, Child's Bath. All in one piece, Patented

Semi-Vitreous Porcelain and Enamelled Iron Ware



COMBINATION BATH

PLATE 10-E

Enamelled Iron Ware, 44x30 inches to tile in recess only. Enamelled white front. Waste in foot section either right or left hand end.



COMBINATION BATH

PLATE 11-E

Enamelled Iron Ware, 44x30 inches to tile in right or left hand corner. Enamelled white all exposed parts. Same as Plate 10-E except for corner installation.



COMBINATION BATH

PLATE 30-E

Semi-Vitreous Porcelain Ware, 44x30 inches to tile in right or left hand corner, or in recess. Glazed white all sides.

The **COMBINATION BATH** is an entirely new departure in the development of modern sanitary comfort, comprising, as it does, a **SEAT, FOOT, SHOWER** and **CHILD'S** bath, all in one.

It possesses many essential common sense features not found in any other types. For instance, it is more comfortable and less wasteful of water; it is possible to bathe and treat the feet without the removal of all clothing, by having only a small amount of water in the foot section. The ledges on the end and both sides of the foot section enable one to treat the feet conveniently, while the dimensions of the foot section allow ample space for the feet when standing or sitting. The mother or maid can bathe a child in comfort under ideal conditions. The child can be bathed on the seat section, and then, if desired, dipped in the water filled foot section.

Remember, when you are considering the length of the **COMBINATION BATH** in comparison with other kinds of tubs, that you do not assume a half reclining position when using the **COMBINATION BATH**, but instead a sitting position; so that your length from the knee down does not count in the length of the space required as it does when using the ordinary bath; also that the uncomfortable, cramped position assumed in the latter case is entirely removed and supplanted by a natural, comfortable posture, such as experienced when sitting in any easy, comfortable chair with just as much room in every direction as a person would have in using the ordinary bath of greater length.

Furthermore, when the **COMBINATION BATH** is used as a shower bath it is equal to any standard type shower receptor. The arrangement of the seat and foot bath permits the taking of a head or body shower bath, the latter without wetting the hair. This commends it, and is a feature which should not be too lightly regarded; in fact, we strongly recommend installation of showers in connection with the **COMBINATION BATH**.

Write Us for Descriptive Booklet Giving Measurements and Other Details

WHEELING SANITARY MFG. CO.
WHEELING, W. VA.

Manufacturers of High Grade Plumbing Fixtures

Sold by Leading Jobbers of Plumbing Supplies

Plate 126-E "The Tranquill" all white Syphon Jet Water Closet Combination.



Plate 100-E Lavatory on Pedestal. Two sizes—24x20 inches and 26x22 inches.



For all Buildings a Quality Frame

The Bradley-Miller Frame is made for the builder who wants good construction. It's made from Genuine Old-Fashioned Michigan White Pine—and you can guarantee that it will not warp, split, shrink or swell.

It comes in two easily assembled bundles of seven units that are readily nailed together in a few minutes time.

The Bradley-Miller is a Quality Frame and will give a life-time of service.

We have some interesting literature and catalogs; they are yours for the asking. Just drop us a postcard. Do it today.

BRADLEY-MILLER & CO.
1200 Marquette St., Bay City, Michigan



Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

Pennrich & Co., Inc., 29 Broadway, New York City, offers a booklet descriptive of the qualities and application of an insulating material known as Torfoleum, which has been used with success, for many years, in Europe and is now made available in the United States by this company.

The Armstrong Cork & Insulation Co., Pittsburgh, Pa., has published a circular under the title "Enough Is None Too Much," which is designed to answer the question, "What Is Adequate Insulation?"

The American Nokol Corporation, Chicago, has published a booklet under the title "Oil Heat—the Joy of More Than a Million Homes," which presents the story, illustrated in colors, of heating with this company's oil burners and also catalogs the various models of burners which it manufactures.

"Beautiful Homes of Concrete Masonry," is the title of a new booklet published by the Portland Cement Association, 33 West Grand Ave., Chicago, which presents in a most attractive manner the artistic possibilities of concrete masonry for home construction.

"Asphalt Through the Ages" is a booklet published by the American Asphalt Paint Co., 844 Rush St., Chicago, presenting the history of the use of asphalt and the facts in regard to the asphalt paint which the company manufactures.

"Trico News" is the periodical publication of Trico, Inc., 1790 N. Kolmar Ave., Chicago, and contains many interesting and useful items on the subject of Trico radiator furniture.

The A. C. Horn Company, Horn Bldg., Long Island City, N. Y., offers a group of loose leaf pamphlets, in a filing folder, covering its various products, such as waterproofing, damp-proofing and decorative materials for the conservation of buildings.

The Frigidaire Corporation, Dayton, Ohio, has published two handsome new booklets under the titles, "Frigidaire—Automatic Refrigeration Systems for Commercial Uses" and "The New Frigidaire—More Beautiful, More Powerful Than Ever."

"Drafting Room Practice," by Eugene Clute, published by The Pencil Points Press, Inc., 419 Fourth Ave., New York City, is a most complete and handsome new volume, the purpose of which is stated as being "to present, in a clear and useful manner, a view of present-day drafting-room practice, as exemplified by the methods employed in the offices of some of the best architects." The entire work of the drafting room is included within the scope of this book, not merely the actual making of drawings, but the handling of projects from the time they come into the office until they are completed. Price \$6.

"The Real Log Cabin," by Chilson D. Aldrich, architect, published by the Macmillan Company, New York City, is a book which answers all of the questions confronting the person who starts out to build a house of logs. It is a thoroughly practical, clearly handled treatment of the whole subject of log construction and at the same time is written in such a style as to be exceedingly entertaining reading to the prospective owner as well as to the professional builder. The author is an architect who became interested in log cabin building after having 20 years of experience in his profession. He has, since then, devoted himself exclusively, for several years, to designing and building log cabins, and as a result is remarkably well qualified to write on this subject. Price, \$4.

A FRANTIC CALL FOR MEN WHO CAN READ BLUE PRINTS AND RUN JOBS AT \$4,000 TO \$12,000 A YEAR

SEE how easy it is now for any man to get ahead in the building game. Nowhere else does such simple training count for so much. Nowhere else are there so many countless thousands of openings as there are with contractors, builders and real estate firms, who are constantly calling for practical men who can read blue prints. Seven billion dollars will be spent this year for building. Trained men are at a premium in this gigantic industry. Untold thousands are needed at steady salaries far above the wage scale.

90 DAYS' EASY TRAINING
PUTS YOU ON THE
WAY TO A BIG-PAY
"BLUE PRINT" JOB

NO longer is it necessary for building tradesmen to spend years learning all the "mysteries" of blue print plan reading. For now you can get the blue print training in three months that has taken others years to pick up "on the job." We train you at home in spare time by the fascinating "blue-print-method" with lessons that are as easy to read as your newspaper. You do not need more than a common school education. There is no hard, grinding study—the whole course is just like playing some interesting new game.

SIMPLE AND EASY AS A-B-C

These plans and lessons come to you from the oldest and largest school of building construction in the country. This is the kind of training that puts men quickly into the \$5,000 to \$15,000 a year jobs, and in contracting businesses of their own. You learn from actual blue print plans—

from practical building experts. You learn how to read all the plans—estimate all the costs—and supervise the entire construction of a building. You learn everything a foreman, superintendent or contractor has to know.

A BIG-PAY JOB— OR YOUR OWN BUSINESS

With this quick, easy training, the building field is wide open to building tradesmen who want to become foremen and superintendents—or who would like to go into business for

themselves. Burgert, Ill., stepped into a Foremanship at a 200% increase in salary. Clifford Scholl went from laborer to Ass't Superintendent in 8 months. Marchand, La., writes: "My salary is now increased 196%." After finishing his training, Baker,

Ohio, made \$3,800 clear profit in 3 months as a Contractor. Depke, R.I., increased his salary 700% in 12 months.

If you really want more money—if you hope to own a business of your own—if you want quick advancement in the building business—decide now to get this training that you must have for a real success.

FREE Book

Simply mail the coupon below for an intensely interesting Free Book, "How To Read Blue Prints," and full information. See what amazing opportunities are open to you in the seven billion dollar building field. Don't delay. Act now. Simply mail the coupon below.



Chicago Technical School for Builders,
Dept. R-121, 118 E. 28th Street,
Chicago, Ill.

Send me without obligation, your free book, "How To Read Blue Prints" and full details of the course and the opportunities in the Building field. It is understood that no salesman will call on me.

Name.....

Address.....

City..... State.....

Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

The Lloyd Floor and Wall Tile Co., P. O. Box 5064, Kansas City, Mo., offers a complete catalog of the ceramic tile which it manufactures, the products being illustrated throughout in colors, and including bath room fixtures.

The Home Modernizing Bureau of the National Building Industries, Inc., 228 N. La Salle St., Chicago, has published a "Manual for Organizing and Operating Local Home Modernizing Bureaus." Price 10 cents.

"Winter Construction Methods," by Charles S. Hill, Associate Editor, Engineering News Record, published by the McGraw-Hill Book Co., Inc., 370 Seventh Ave., New York City, has as a sub-title "The Processes and Plant Employed in Prosecuting Construction Activities in Cold Weather," and is described as being a summary of the principles and practices which have been successful in winter construction. Price \$3.

"Patent Law and Practice," by Oscar Geier, of Richards & Geier, Patent and Trade Mark attorneys, 274 Madison Ave., New York City, who have published the fourth edition of this book, is designed to give up-to-the-minute information to lawyers, manufacturers, merchants and those generally interested in the subject of inventions and trade marks.

The E. L. Bruce Co., Memphis, Tenn., offers two new booklets under the titles, "A Flooring Achievement—the Bruce Cellized Oak Floor Block" and "Colonial Distinction in Plank Oak Floors by Bruce."

Harvey Hubbell, Inc., Bridgeport, Conn., offers a new

booklet describing and illustrating in color its Acorn screwless plate line for switches and outlets.

"Lupton Windows for Standard Openings Reduce Building Costs," is the title of a new booklet published by the David Lupton's Sons Company, 2203 E. Allegheny Ave., Philadelphia, Pa. It is the second edition of this company's Catalog No. P-50 and is most complete and informative.

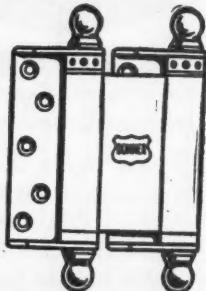
"The Cost of Comfort" is the title of a recent publication from the National Lumber Manufacturers' Association, Washington, D. C. This booklet is described as "A Handbook on the Economics of Dwelling Insulation" and contains very complete information on the relative insulation effect of all the common types of insulating and building materials and their actual cost in comparison with the cost of fuel saved by their use.

The American Telephone and Telegraph Company, 195 Broadway, New York City, has published two very handsome books which are of special interest to the building industry, under the titles "Planning for Home Telephone Conveniences" and "Planning for Telephones in Buildings." These books offer a valuable service to architects, builders and owners in presenting practical information relative to the planning of telephone wires and apparatus in advance of construction so that it may be most advantageously installed.

The Concrete "Form-Hold" Corporation, Culver Bldg., Culver City, Cal., has prepared and is distributing free of charge, to contractors throughout the country, a time sheet on the back of which is a cost segregation division, which will be of practical aid to contractors in accurately determining their costs.

David Lupton's Sons Company, 2203 E. Allegheny Ave., Philadelphia, Pa., has recently published a small booklet, "The Windows of Your Home," which answers 34 of the most common questions about windows.

Bommer

Spring  **Hinges**

are the best

are the best

Millions and Millions

of People are Pushing

Them

whenever they open a door

Follow the line of least resistance

Use Bommer Always

They are the best

Bommer Spring Hinge Co., Brooklyn, N.Y.

GAS

Now Available Anywhere — Cheap

GAS for the Kitchen

GAS-O-GEN

GAS for the Restaurant Hotel etc.

No Carbide—Kerosene—Gasoline—nor Oil of Any Kind

The easiest, cleanest, cheapest and safest method of producing gas for cooking. No other kind of heat can compare with it. Ample supply of gas at all times for any standard gas range. Abundance of hot water at very low cost. POTS WILL NOT BLACKEN.

Quick Heat, Odorless, Noiseless, Foolproof, Safe

DISTRIBUTORS WANTED

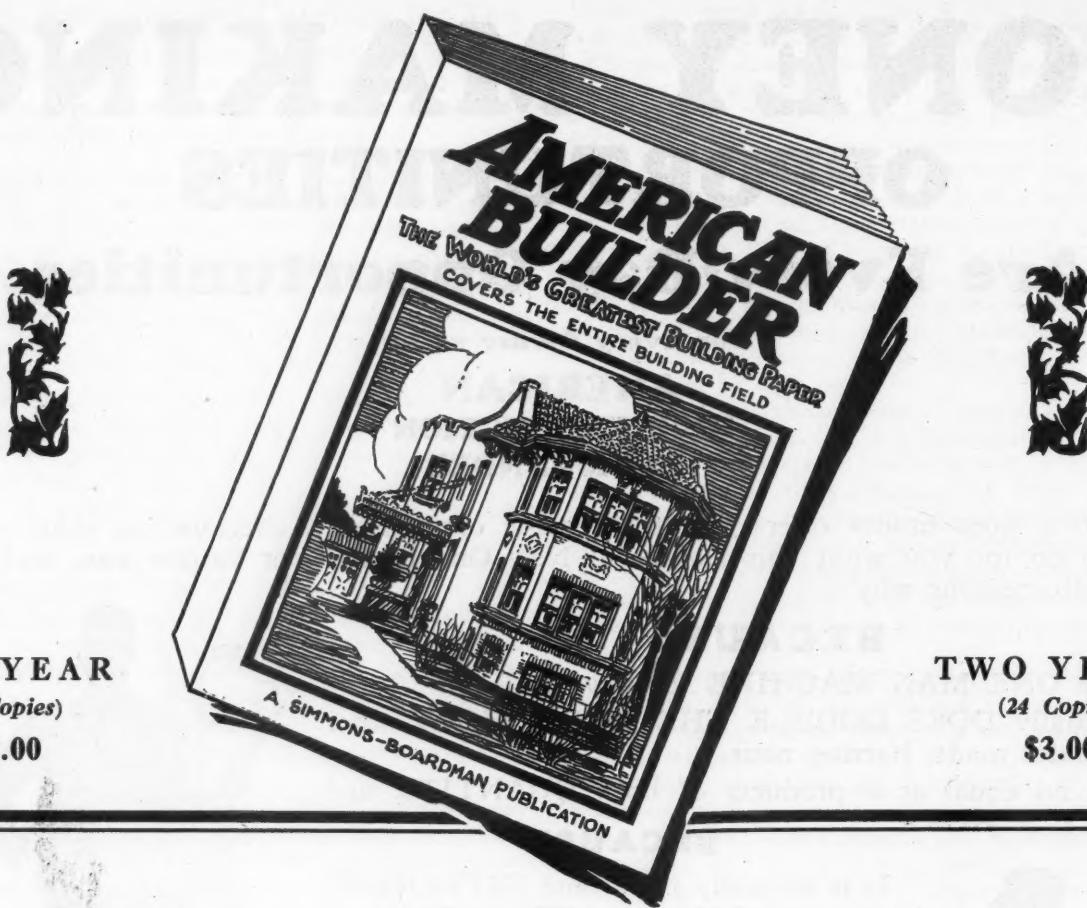
Exclusive Franchise

WRITE FOR OUR SALES PLAN

GAS-O-GEN CORPORATION

165 W. Wacker Drive Chicago



A Christmas Gift *That Lives Throughout the Year*

FOR certain friends of yours, engaged in the building business or who are contemplating building a home, we suggest *A Year's Subscription to the AMERICAN BUILDER as a Christmas Gift.*

Such a gift will be appreciated because it will be so helpful. The AMERICAN BUILDER in its attractive red covers will reach your friends *twelve times* during the year, each copy bringing with it a pleasant memory and a kindly thought of *you* who sent it.

\$3.00 will pay for ONE 1-year Gift Subscription and your own 1-year renewal subscription.

Foreign Subscriptions
\$2.00 per Year Extra

\$4.50 will pay for TWO 1-year Gift Subscriptions and your own 1-year renewal subscription.

-----Use This Form to Send Your Order-----

THE AMERICAN BUILDER
1827 Prairie Avenue, Chicago, Ill.

Date.....

Enclosed find \$..... Send AMERICAN BUILDER one year to each of the names enclosed and notify each person that subscription is a gift from me.

Send Subscription to

Tell Subscriber it is a gift from

Name

Name

Address

Address

City

City

State

State

To send additional Christmas Gift Subscriptions, write names and addresses on separate sheet and attach to this form. Send \$2.00 for one Gift subscription; \$1.50 each for two or more.

A SYNTROn Saved \$448⁸⁰ on one job...

For:

Drilling
Chipping
Channeling
in concrete
brick or
masonry.



and is
still going strong

Called upon to bush 2640 sq. ft. of concrete on a state bridge near Springfield, Pa., this engineer used a SYNTROn. Prior to this job, contracts had been sublet for bushing at 22 cents per square foot. SYNTROn cut the cost to 5 cents, saving 17 cents on every square foot or a total of \$448.80 on the job—several times more than the cost of the hammer. This is only one of thousands of similar record. Why not let a SYNTROn save for you?

SYNTROn ELECTRIC HAMMER

A light weight, motorless, electric hammer, powered from any light socket. It strikes 3600 speedy, powerful blows a minute, doing the work of ten men with hand tools. Saves time and labor on every job. Pays for itself in the first 40 hours.

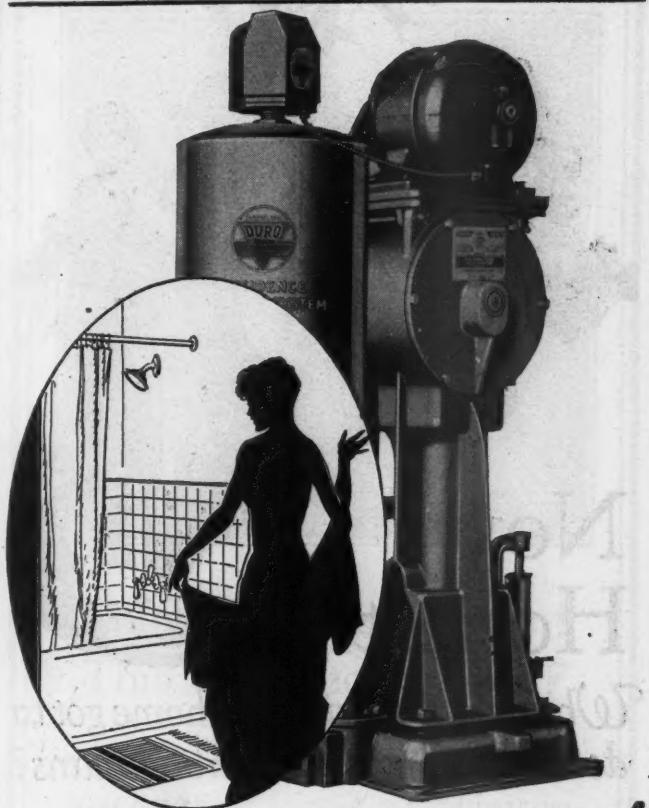
**"For the small job
—rent a SYNTROn"**

When you have a small job—rent a Syntron and learn for yourself what saving can be made in time and worry.

Use this coupon for further information
SYNTROn CO., Lexington Ave., Pittsburgh, Pa.

Send full particulars Name
about Syntron Hammers and your rental service. Address
.....

MOST GALLONS PER DOLLAR



A Remarkable Value!
DURO Deep Well System
**only \$155⁰⁰ F.O.B.
DAYTON**

Now you can install world standard, Duro Automatic, Electric, Fresh Flow Deep Well Systems in suburban and country homes for as little as \$155., f.o.b., Dayton.

Patented features and outstanding performance have made Duro Deep Well Pumps and Systems the popular choice of builders everywhere. Get the complete details of this and other remarkable Duro values. Choose Duro—without a fault.

Send in the coupon below for a free copy of the new Duro Catalog. Please state whether you are a builder or contractor.

THE DURO COMPANY
112 Monument Ave. Dayton, Ohio

DURO

Automatic Water Systems

Send for NEW CATALOG

THE DURO COMPANY,
Monument Ave., Dayton, Ohio.

AB-12

Please send me the new Duro Catalog.

Name
Street
City State

A.B. 12-28



Now, Honestly—

What has the price of a home got to do with living with garbage cans?

BECAUSE most of us consider \$8,000 to \$12,000 enough for a home, does that mean that we are not interested in our family's health, the fire hazard of basement rubbish pile, the smell and filth of garbage and the never-ending chore of carrying it outside in any weather?

The Kernerator is actually more vital, more valuable and more *appreciated* in the average home than in the palatial mansion where there are servants. For the wealthy simply accept the Kernerator as an essential of fastidious living, while the family in average circumstances looks on it as an intimate, personal thing of hourly contact, touching directly the daily health, the comfort and the convenience of the husband, his wife and children.

Ask ANY Kernerator-equipped householder which would be parted with soonest—the Kernerator, or "flash" features?

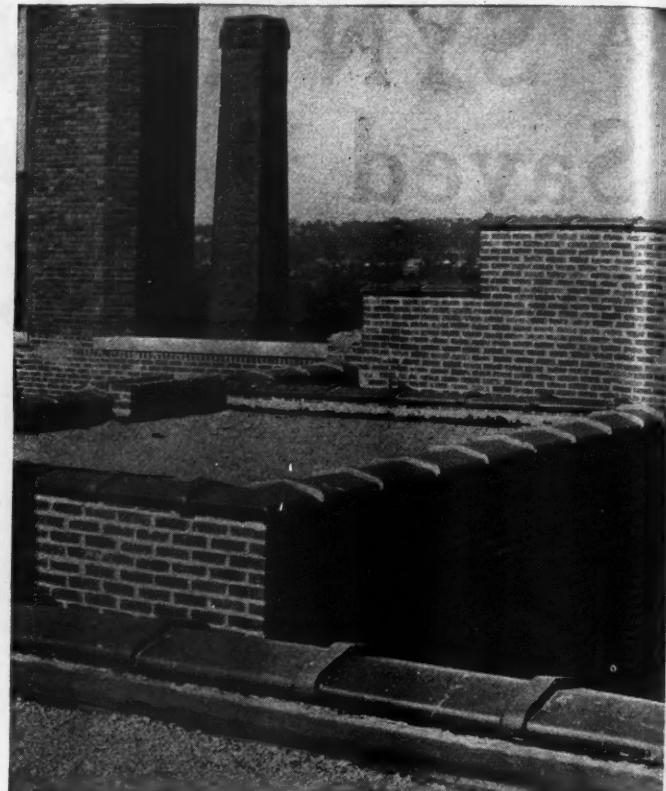
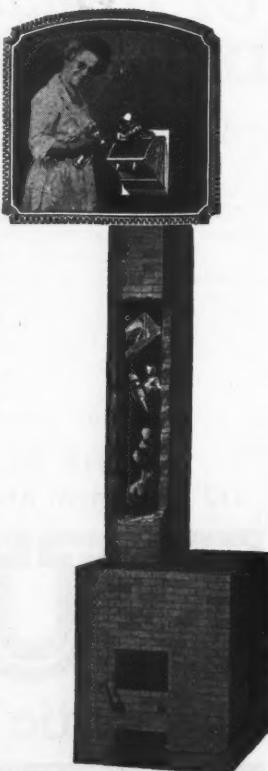
Kernerator residence models as low as \$95 and the masonry adds but little more when regular chimney is used.

See Sweet's, write for literature or phone your local Kernerator representative. Offices in 89 cities.

KERNER INCINERATOR COMPANY
753 East Water Street Milwaukee, Wis.

KERNERATOR
REG U.S. PAT OFF
THE CHIMNEY-FED INCINERATOR

Garbage and Waste Disposal
without Leaving the Kitchen.



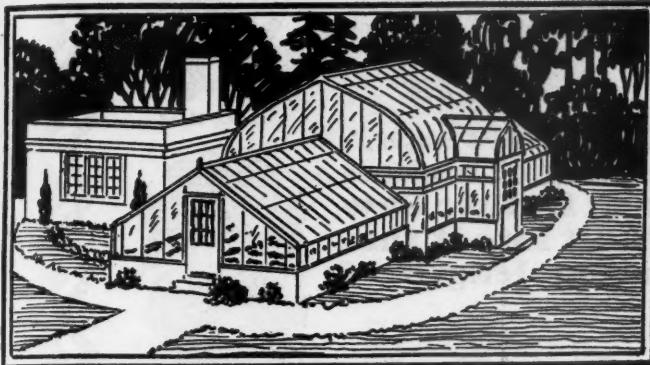
**A brick wall
without clay wall
coping is like a
house with-
out a roof**

CLAY PRODUCTS ASSOCIATION
CONWAY BUILDING
Chicago

VITRIFIED *Soft Glazed* CLAY
Wall Coping

AB12—Gray

use KUHLS for Glazing



You will find KUHLS' ELASTIC GLAZING COMPOSITION unequaled for bedding and glazing sash, skylights, conservatories and glass construction work, tile-setting, etc. Fine for pointing stone and terra cotta work. Ideal for window calking.

Kuhls' Composition is elastic, never sets hard, adheres strongly to wood, metal, glass, concrete, etc. Never cracks or crumbles. Stands heat and cold and is not affected by moisture or changing weather.

Kuhls' Elastic Glazing Composition can be economically and efficiently used in all construction work—from a four-room cottage to a 25-story building. It is now used by the best builders, contractors and architects and greenhouse builders in the country.

Fill out the coupon below; we will mail you a Free Sample, literature and prices.

H. B. FRED KUHLS
6415-21 THIRD AVENUE
BROOKLYN, NEW YORK



**Get These
Booklets
and FREE
SAMPLE**

H. B. FRED KUHLS,
6415 Third Ave., Brooklyn, N. Y.

Please send me free of charge your literature and a sample of KUHLS' Elastic Glazing Composition.

Name.....

Street.....

City.....

State.....

My occupation is

Builder Dealer Architect Real Estate Home Owner



Why Not Get Aboard This Greenhouse Idea? It's a Seller

You don't have to point out the beauties of a small attached greenhouse, when it's part of your house plan.

With the sun flooding into it, it is as full of delightful suggestion as an oil pro-motor's circular. It costs so little to the builder, and means so much to the prospective home owner, that it is worth twice what it costs you as a sales feature.

Let us tell you what other builders have told us. Also let us show you how easy a greenhouse is to build. It's no more special work than putting in the kitchen sink.

Just send the coupon and have the interesting particulars

Hitchings & Company

General Offices and Factory:
ELIZABETH, N. J.

NEW YORK 136 Liberty Street

PHILADELPHIA 6701 N. Broad Street

WILKES-BARRE, PA. 402 Coal Exchange Bldg.

BRIDGEPORT P. O. Box 96

BOSTON 161 Massachusetts Ave.

ALBANY, N. Y. P. O. Box 1094

BUFFALO P. O. Box 242

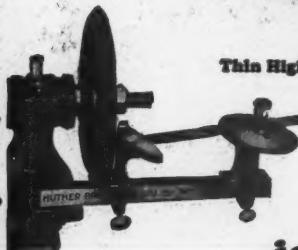
HEMPSTEAD, L. I., N. Y. P. O. Box 111

(Please print plainly—Name and Address)
Send me full facts about your Sunshine Room

Name.....

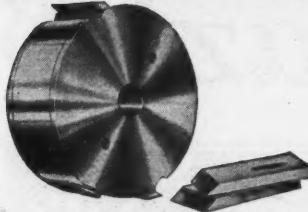
Address
AB-12-28

There's more profit in a HUTHER SAW

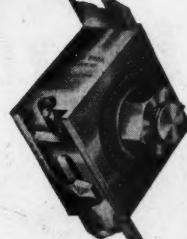


Thin High Speed Steel Knives

Grinding Attachment



Cylinder Cutter Head



Cutter Head

Circular Mitre Saw
with Cleaner Teeth

Backed by fifty years experience in the making of highest grade saws, each Huther Saw has a quality built into it that insures maximum length of service.

Huther Bros. Saw Mfg. Co.
ROCHESTER, N. Y.

Makers of Better Saws for More Than Fifty Years



Dado Head

Get 'Em While They're Hot!



The picture above shows an inexpensive store front installed recently by "International" for a book and stationery store. There are many such prospects waiting to be shown the way!

NOW—just before the Christmas season—there are merchants in your town who "wish they had better store fronts." They know that all the year 'round, and especially at this time of the year, business would gravitate toward them if their store fronts were more attractive. They are busy now, with preparations for the Holiday season, but now is the time to start your "whispering" campaign, and next spring new orders will be yours!

In the planning of store fronts, the International Engineering Department will be glad to help. Just send us your rough ideas and dimensions. We'll submit plans and estimates, at no cost to you. Write for our big Store Front Catalog.

PRODUCTS of INTERNATIONAL
Store Fronts - Steel Columns
Steel Ceilings - Skylights
Steel Windows
Steel Girders - Steel Trusses

INTERNATIONAL STEEL & IRON COMPANY
DEPARTMENT 18
EVANSVILLE INDIANA

PRODUCTS of INTERNATIONAL
Sidewalk Lights - Coal Chutes
Public Garages - Roof Ventilators
Airplane Hangars
—and many more listed in our Catalog!

KIMBALL

STRAIGHT LINE DRIVE

ELEVATORS

CHIEFTAIN—A
New Eppley Hotel
at Council Bluffs,
Iowa

Equipped with Kimball
Elevators



Passenger Elevators

In the office building, where the absolute certainty of elevator service is an essential, it is interesting to note that the type of elevator construction is pointing towards the Kimball Straight Line Drive Elevator Machine, as the most practical solution for the builder who figures the upkeep, as well as initial cost.

The simplicity of Kimball Straight Line Drive construction, its fewer parts to get out of order, forms a sane contrast to older style double unit type, still much in use.

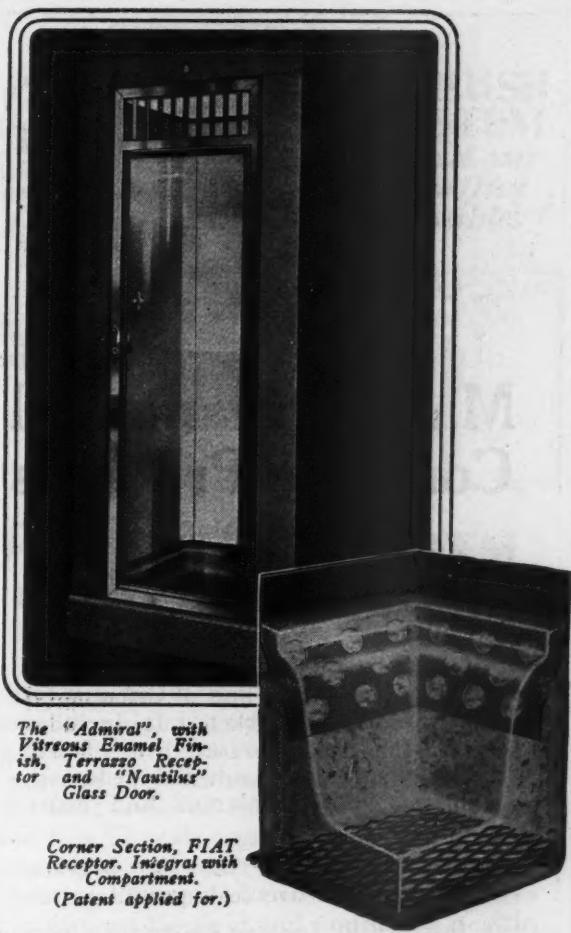
If you are interested in Kimball efficient elevator installations you can secure valuable information and literature on the Kimball Straight Line Drive Elevators by writing to this address:



KIMBALL BROS. CO.
COUNCIL BLUFFS, IOWA

989-97 Ninth Street Council Bluffs, Iowa

Elevator Builders for 45 Years



A COMPLETE SHOWER IN ONE UNIT

Installed in Corner or Closet Space

The Fiat Shower Bath Compartment greatly simplifies the problems of installation and cost. A complete unit shipped ready for installation. Only corner or closet space required—complete installation by plumber. The most wonderful improvement ever offered—the last word in shower enclosures. Permanent leakproof construction under all conditions—positively unaffected by expansion, contraction or settling of building.

A Fiat Shower is the popular bath made practical and doubles the bathing facilities of the home. The modern bath for modern homes. No muss, no fuss, no spoiled decorations. The ideal bath for homes being remodeled.

Learn more about the superior advantages of Fiat Shower Bath Compartments by writing for copy of illustrated 32-page catalog.

Fiat

**Shower Bath
Compartment**

Thousands in use.
Rigidly built—distinctive appearance—
strictly sanitary—
seven models—doors or curtains optional.
Reasonably priced.

FIAT METAL MFG. CO.
1201 Roscoe St. Chicago, Ill.

FIAT METAL MANUFACTURING CO.
1201 Roscoe St., Chicago, Ill.

Please send me full information regarding Fiat Shower Bath Compartments.

Name _____

Street _____

City _____ State _____

Please check—I am a Contractor Plumber Architect
Dealer Realtor Home Owner



Junior Cretan Urn No. 933

Make Ornamental Concrete Products

Many builders are making this a very profitable sideline—and most of them are using Ideal Molds exclusively.

Ideal, a pioneer in this field, makes the most complete line of ornamental molds on the market. It includes molds for making vases, urns, flower boxes, lawn seats, sun-dial pedestals, balusters, porch columns and many other items.

Ideal molds are easy to operate, lock tight and are leak proof.

Just ask us for our illustrated Ornamental Mold Catalog and learn how easily these fast selling products are made.



Face-Down Block Machine

This is the oldest, simplest and most satisfactory hand-operated face-down block machine. It makes a wide range of sizes and styles of block for meeting every building need. May be made automatic by the addition of a few simple power devices. Ask for catalog.

IDEAL
CONCRETE MACHINERY.
TRADE MARK REG. U.S. PAT. OFF.

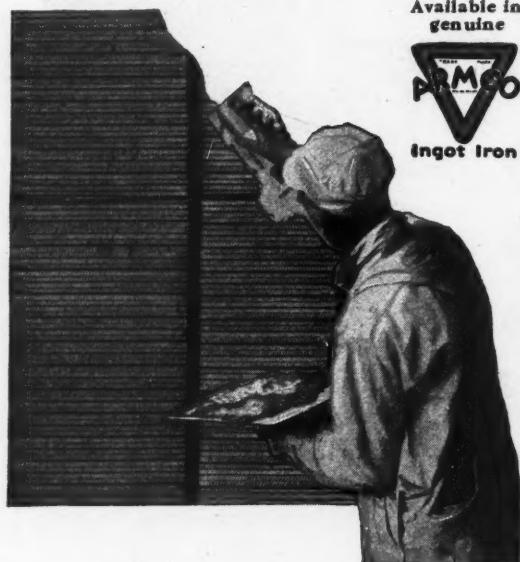
DIVISION OF
CONSOLIDATED CONCRETE MACHINERY CORPN., ADRIAN, MICH.

The New Ideal products plant mixer is a marvel for speed and thoroughness of mix—a combination of 14 special features never before found in a single unit. Write for catalog today.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Herringbone

Gives Added Value to Metal Lath



Available in genuine
AMCO
Ingot Iron

THE well-known advantages of metal lath for the prevention of plaster cracking and protection against fire are emphasized where Herringbone is used. For the small, scientifically designed mesh provides a perfect reinforcement and an ideal key for the plaster. The rigidity and straight surface of Herringbone prevent bulging and save plaster, labor and time. Herringbone assures the best results in permanent plastering and costs no more in the completed work.

Full information and literature
on request

GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO

Genfire Dealers everywhere assure prompt deliveries and satisfactory service. Call on them.

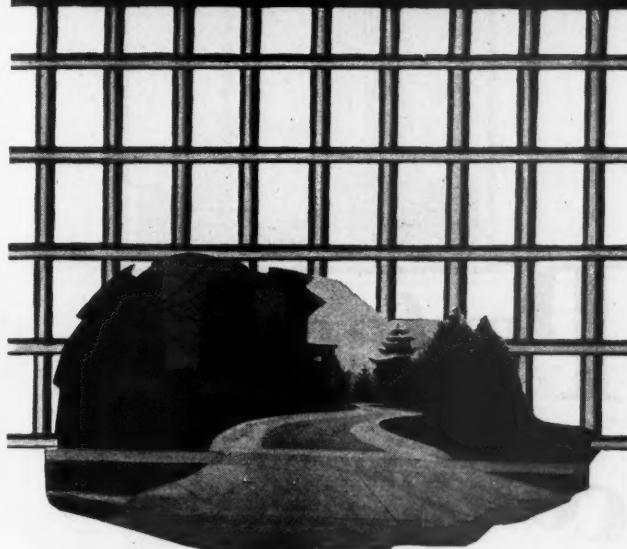


Member of the National Council for Better Plastering

American Steel & Wire Company's

REINFORCING for Driveways and Sidewalks

"The Steel Backbone for Concrete"

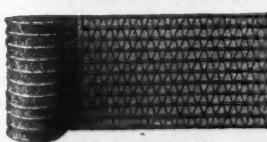


Longer Life — Better Appearance

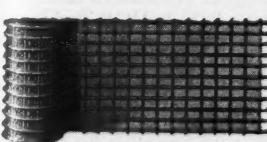
For the same good reasons that you reinforce concrete roads and street pavement, you also want steel reinforcement in the driveways and sidewalks you build. Lengthen the life of the concrete, reduce repair expense and protect the beauty of a clear surface free from cracks and patches.

Good-looking jobs are your best advertisements.

Experienced contractors are specifying and using American Steel & Wire Company reinforcing fabric—Triangle Mesh or Electric Weld. Made of cold drawn, high tensile strength steel—the kind that can be depended upon for concentrated binding strength over the longest period of time. Supplied in rolls or sheets for any kind or size job. Write us for complete information.



Triangle Mesh



Electric Weld

American Steel and Wire Company

SALES OFFICES

Chicago, New York, Boston, Atlanta, Birmingham, Cleveland, Worcester, Philadelphia, Pittsburgh, Buffalo, Detroit, Cincinnati, Baltimore, Wilkes-Barre, St. Louis, Kansas City, Minneapolis-St. Paul, Oklahoma City, Memphis, Dallas, Denver, Salt Lake City.
*San Francisco *Los Angeles *Portland *Seattle
*United States Steel Products Co.



"THRUSH
SYSTEM
cured our
heating
troubles!"

Put THRUSH SYSTEM on your Sales Force!

THE HEATING plant you put in the homes you build has much to do with the ease with which the sale may be made. Nothing is quite so important in the enjoyment of a home as good heating. Hot Water heat is the best form of heating for homes and when it is Thrush equipped, it is the most economical and entirely satisfying method of heating known. Thrush Equipment saves 20 to 40% of the fuel and maintains healthful, uniform temperatures automatically.

If You Remodel Homes Use THRUSH SYSTEM!

Thrush System may be put on an old Hot Water Heating plant or a new one. It makes any hot water job work better. When you remodel a home, remodel the heating plant too—inexpensively but efficiently. Put Thrush Equipment on it and you may save yourself the cost of having to put in a new heating plant.

You can build a reputation that will increase your prestige as a builder of homes—and your profit too—by adopting the Thrush System of Hot Water Heating for all of your houses.



H. A. THRUSH & CO., Dept. B
Peru, Indiana
Send your booklet "Which Heating Plant
for My Home?" and more information.

Name _____

Address _____

Business _____

Some Line!

—yet not so big as to sacrifice quality

Ash Dumps
Bases
Base Screed
Batten Strips
Beaded Ceiling
Bolts
Boots
Building Corners
Cast Iron Boots
Clean Out Doors
Coal Chutes
Conductor
Conductor Heads
Conductor Hooks
Cont. Hip
Coppers
Corner Bead
Corrugated Roofing and Siding
Cupolas
Cutoffs
Double Gutters
Drops
Eave Trough
Elbows
Ends
Finials
Fire Place Dampers
Forming Rolls
Flashings
Gable Crosses
Garbage Receivers
Glass
Guards
Gutters
Gutter Braces
Half Balls
Hangers
Heads
Hip Cap
Hip Shingles
Hoghouse Skylights
Hooks
Letters
Marquise

Metal Lath
Miter
Ogee Gutters
Operating Room Skylights
Picture Mould
Pipe Folder
Plain Brick Siding
Plain and Self-Capping Roll
Roofing
Pressed Standing Seam Roofing
Ridge Cap
Ridge Roll
Rivets
Rivet Headers
Rock Faced Brick Siding
Rock Faced Stone Siding
Rod and Nut Hangers
Roofing "V" Crimp
Roof Gutters
Sawtooth Skylights
Shoes
Sheets
Skylights
Skylight Guards
Snips
Squaring Shears
Standard Gutters
Steel Ceiling
Stove Bolts
Strainers
Tin Flashings
Tongs
Tools
Tower Crosses
Valley
Ventilators
Ventilator Bases
Wall Ties
Weather Board
Window Guards
Wire Hangers
Wire Strainers
Zinc



If you read

that list above,
you'll know how
well we are fixed
to help builders
and contractors.

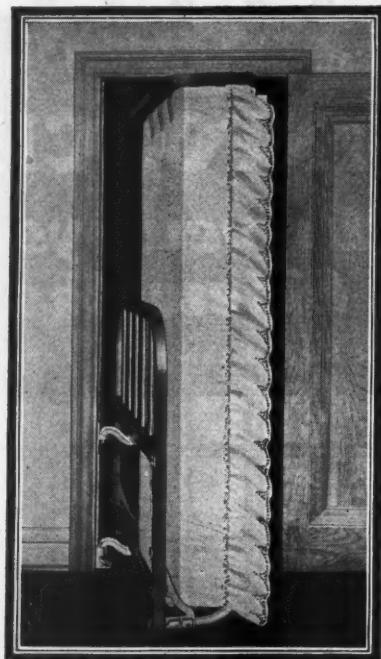
Send for our cat-
alog and get an
idea of WILLIS
quality.

"Willie Willis"

WILLIS MFG. CO.

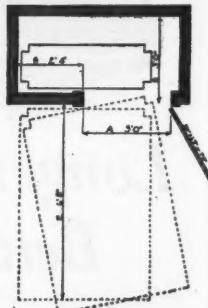
Dept. 128

GALESBURG, ILLINOIS



Perfect CONCEALMENT

Above is clearly
illustrated the Holmes
PIV-A-DOR principle of
operation. To the right you
can see the solid construction of
the PIV-A-DOR one piece head
end. This feature is important in
this type of concealed bed.



Behind Any

THREE [3] FOOT DOOR

APARTMENTS and homes designed and built around the Holmes Concealed Bed idea are conceded by Architects, Builders and Owners as the highest development of the concealed bed principle. And NOW since the advent of the new Holmes PIV-A-DOR —there is no concealed bed problem that cannot be met from the Holmes line. The Holmes PIV-A-DOR Bed is a sanitary, all metal bed which is pivoted to the jamb and threshold of any closet door. The PIV-A-DOR principle allows a full sized 4' 6" bed to swing freely and easily through a THREE FOOT (3 ft.) DOOR at the slightest touch. But unlike other pivot type concealed beds the new PIV-A-DOR when actually lowered into position for use, occupies 486 square inches less floor space. It also has the added feature of a non-collapsible head piece. This feature makes it absolutely impossible for anyone sleeping in the bed to receive bodily injury through the spring back of the folding type of head piece common to other types of pivot swinging beds. The new Holmes PIV-A-DOR Bed in addition to its mechanical superiority—has no equal in beauty, sleeping comfort and ease of operation. Its very simplicity makes it the real trouble-proof Concealed Bed of today. No matter what your concealed bed problem is—See The New HOLMES PIV-A-DOR BED TO-DAY. Let Holmes experts help you—No OBLIGATION for such service.

CONCEALED BED CORPORATION

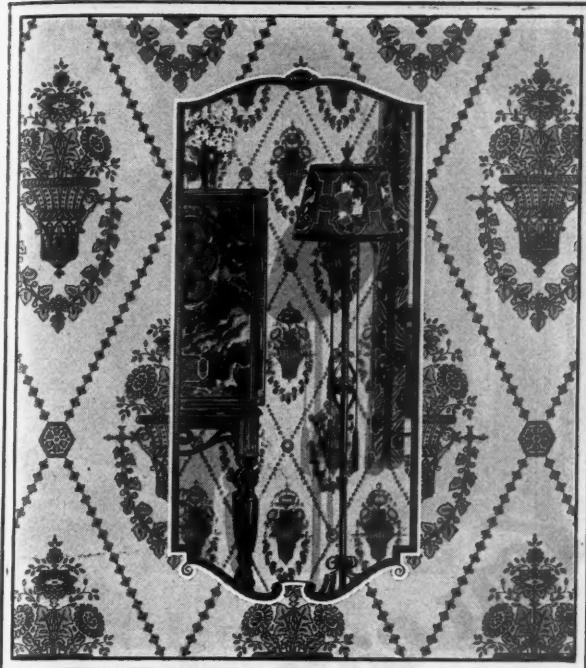
Distributors for Holmes and Marshall & Stearns Co.

Chicago

Dept. 122



Illinois



1929 Wall-Tex most modern not only in structure but in design

DECORATORS in increasing numbers are turning to Wall-Tex. And logically—for here are the finest designs ever developed in cleanable fabric wall-covering. They are appropriate to every room in the house.

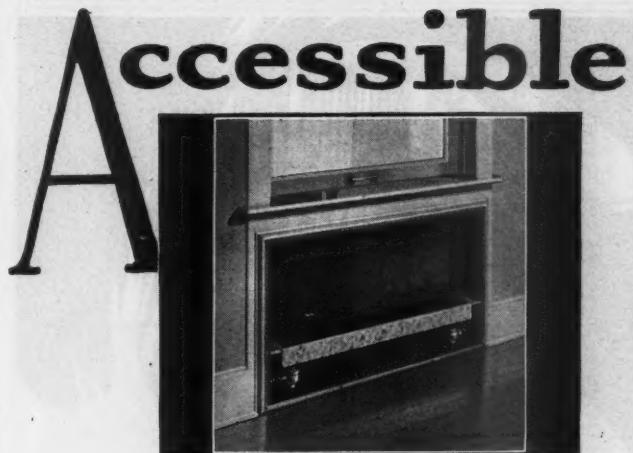
1929 adds many pleasing creations to the imposing Wall-Tex array. One is illustrated. Through its use living-rooms in various settings can be made most charming. Others there are, strikingly modern in design and color, for dining-rooms, living-rooms, bedrooms and nurseries. Well-known artists are contributing to Wall-Tex popularity. And besides unlimited beauty, decorators and owners are offered in Wall-Tex this further satisfaction: Thoughtfully studied and applied effects will never be marred through the premature deterioration or breakdown of this wall-covering.

For Wall-Tex has the strength to make its beauty lasting. Choicest materials and pigments are used. Fabric is flexible, yet remarkably strong. Keeps cracks from showing in old plaster; keeps new plaster from cracking. It is quickly cleaned with a damp cloth. Certainly you should see the complete Wall-Tex line, including the plain white numbers now extensively used for foundation work.

Decorators, builders, architects should write for full information on their particular needs. Dealers: Write for 1929 sample book. The Columbus-Union Oil Cloth Co., Columbus, Ohio.

WALL-TEX
PERMANENT
WALL-COVERING

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



The Under-Window Concealed Heater is built for easy inspection

If you have admired the appearance of Trane-equipped rooms—but have hesitated to wall up any heating unit for the life of your building—investigate the Trane Under-Window Concealed Heater.

At the turn of a few screws, the front panel comes off. The entire heating unit, with its fittings and connections, is no more difficult of access than an ordinary exposed radiator—months or years after the original installation.

*This model fits between walls of standard thickness. Everything is furnished. There are no extras to buy. No trade disputes. A one-man job of installation. And all the advantages of Standard Concealed Heaters are fully retained. Here is something worth looking into.

Write for booklet. We also manufacture the Trane System of Vapor Heating.

THE TRANE CO. (Est. 1885)
276 Cameron Ave., Dept. 12, La Crosse, Wis.

H E A T C A B I N E T S **TRANE** CONCEALED
HEATERS
PUMPS, UNIT HEATERS, AND HEATING SPECIALTIES



THE TRANE CO., Dept. 12,
276 Cameron Ave., La Crosse, Wis.
Send free booklet on your Under-
Window Concealed Heater.

Name. _____

Address. _____

Type of Building. _____



Noisy floors—boards that squeak and groan under every footfall—are banished forever by the use of Reading Cut Floor Nails.

For these nails go right through hard wood, sink in and stay there. Because of their rectangular shape, the wood fibers grip against their surface, holding them from tip to head. No bent nails—no springing—no noise!

Remember that Reading Cut Nails have 72% more holding power than wire nails—and cost only a little more. The satisfaction you get from using or selling them is worth many times their cost.

READING IRON CO. • *Reading, Penna.*

Atlanta	Chicago	Los Angeles	St. Louis
Baltimore	Cincinnati	New York	Tulsa
Boston	Detroit	Pittsburgh	San Francisco
Buffalo	Houston	Cleveland	Fort Worth
	Seattle	Philadelphia	



READING CUT NAILS



*You can always
pick out a*

K & E FIELD BOOK

No matter how much punishment it has received—blistering tropical heat, cold rain, rough handling—your records are always safe in it.

Small wonder, when one considers these cardinal points in its construction—

1

100% Rag Stock
(Does not grow brittle with age).

2

Waterproof
(Sheets do not blot after being soaked).

3

Wire-stitched
(No pulling apart, no dilapidated appearance, no valuable pages lost.)

Write for further information

KEUFFEL & ESSER CO.

New York, 127 Fulton St. General Office & Factories, Hoboken, N. J.

CHICAGO

SAN FRANCISCO

ST. LOUIS

MONTREAL



Sell Homes Easier Rent Them Faster

CARDINAL TOGGERY RACKS give the space of two closets in one. They keep toggeries smooth, hats in shape, shoes off floor—all in plain sight, within easy, instant reach. Cardinals lighten women's work. There are thousands in use everywhere. Housewives like Cardinals—because they add a finishing touch to homes and make them really modern.

Cardinals are important selling and renting features. Their cost is small, their benefits great. Beautiful Duco finish. Jade Green, Old Rose and Silver Color Cadmium. All metal. Strong. Easily attached on the inside of any closet door.

CARDINAL Toggery Racks

are a necessity in the small apartment, an added convenience in large ones—and in all houses, city and country, they not only save closet-room—but make it. You can see for yourself the appeal in them to every family, large or small.

Write today for prices and quantity discounts. For a very small outlay, you can add a big profit factor. Cardinals have a mighty persuasive force—the instant you swing open the closet door. They are certainly a big talking point.

THE CHAS. FISCHER SPRING CO.

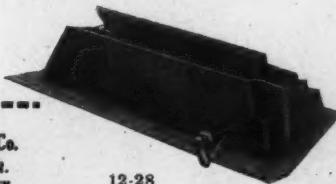
244 Kent Ave. Brooklyn, N. Y.
Telephone, Greenpoint 10,000

PEERLESS Building Specialties



Yes, It is an Attractive Fireplace

But will its performance when a fire is burning in it be as satisfactory as its outside appearance? Will there be sudden puffs of smoke into the room, causing discomfort and dirt, or will the fire burn evenly and brightly and be a pleasure as a real fireplace should be? You can be assured of fireplace satisfaction if a Peerless Dome Damper forms the throat construction. It is a scientifically designed dome and door which forms a perfect throat and the easily regulated door allows perfect control of the draft at all times. And this is important, too—when the fireplace is not in use the door can be entirely closed, keeping out rain, soot, insects and dirt. It is also used as a means of regulating the temperature of the room. It is a real fireplace necessity.



Peerless Mfg. Co.
324 W. Main St.
LOUISVILLE, KY.

12-28

Contractor
 Home Owner
 Architect
 Dealer

Kindly Check:

Please send Fireplace Damper information.

Name.....

Address.....

Town..... State.....

SAMSON SPOT SASH CORD

SOLID BRAIDED COTTON

SAMSON SPOT SASH CORD is made of extra quality cotton yarn spun in our own mills and is guaranteed to be free from imperfections of braid or

finish. It is the most durable material for hanging windows. It can be easily distinguished by our trade-mark, the Colored Spots. Send for samples.

SAMSON CORDAGE WORKS - BOSTON, MASS.

*"There is a Difference
in Sash Cord"*

SAMSON SPOT
WINDOW SASH CORD

100 ft. 100 ft.

Mettowee Colored Stone Walks



Embellish your homes, giving them greater selling power and greater values at only a trifling higher cost.

What difference from the cold plainness of ordinary walks.

Prompt deliveries can be made by your nearest dealer, or, if he does not have sufficient stock we will gladly put you in touch with one who does.

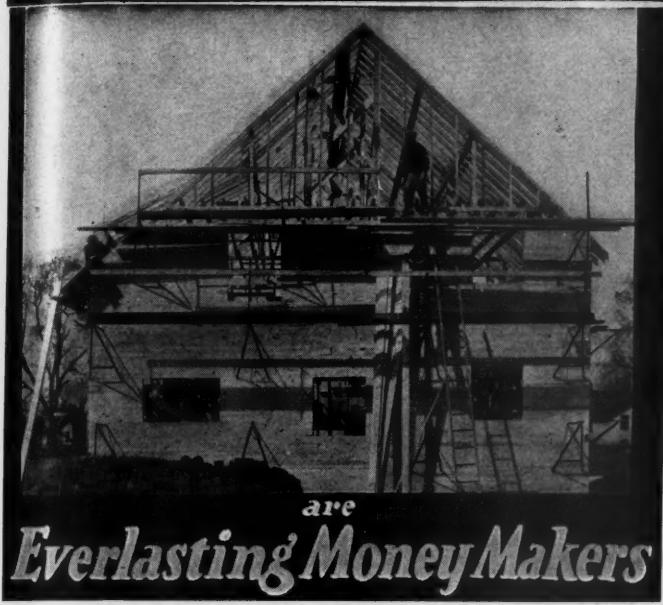
Send for our illustrated pamphlet "M"



**VENDOR SLATE CO.
INCORPORATED
EASTON, PENNSYLVANIA**



Trouble Savers



are Everlasting Money Makers

Why "Repeat" Scaffolding Costs on Every Job?

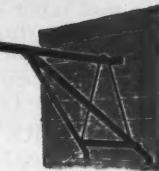
You can get Trouble Saver Steel Scaffolding for the same money it takes to wood scaffold a single job. And its first cost is its *only* cost. Lasts a lifetime with no repair or replacement expense.

Minutes vs. Hours

Ten minutes spent in erecting Trouble Saver Steel Scaffolding takes the place of half a day's work in erecting wooden scaffolding. Dismantling is just as fast. Investigate!



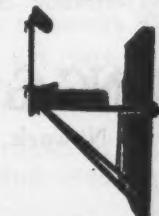
Trouble Saver Adjustable Steel Trestles (patented) are quickly adjusted to desired heights. 8 sizes. Each size adjustable from 5 to 15 different heights, giving a range from 16 inches to 12 feet by 3 inch lifts. Save countless sets of wooden horses.



Trouble Saver Studding Brackets support a ton. Will not bend.



Trouble Saver Nail Attached Brackets support a ton. Held by four nails.



Trouble Saver Bolt Brackets. Held by $\frac{5}{8}$ " bolts.

Trouble Saver Steel Products

Studding Brackets
Nail Attached Brackets
Bolt Brackets with
Safety Railing
Adjustable Trestles

Ladder Jacks
Wood Shingles
Mortar Board Stands
Sectional Steel
Scaffolding

The Steel Scaffolding Company

1101 No. Governor St., Evansville, Ind.

MONEY BACK TRIAL OFFER

Please send me details on your 30-day free trial offer and full information and prices on Trouble Saver.....

Name

Address

City..... State.....

Keep Your Saws In Condition -Do Saw-Filing for Others, too



"I ordered an F-3 Foley Filer, which I intended to use for my own saws, being a carpenter, and also to do some filing on the side when not busy at my trade, but soon found that I would have to quit one or the other, so started filing. I have now built up a nice business that is better than carpentering. In September I ordered a Foley F-5 Power-Drive machine. It does nice, clean work, and a perfect job."

S. C. MOLLER.

FOLEY AUTOMATIC FILER

Offers you the same opportunity to get into a FINE PAYING CASH BUSINESS of your own, where you are not affected by dull times, strikes and off seasons. Our FREE PLAN will help you get started during your spare time this winter, and you can soon work up a fine full time business. C. W. Clough writes—"My saw filing business has increased from 6 saws per week to over 100, and is still growing." Lots of other carpenters have done this, too.

Foley-Filed Saws Cut Faster, Cleaner and Truer

Hand-filing can't compare with the work of the Foley. It AUTOMATICALLY files and evens the teeth in one operation, and with such mechanical accuracy that they cut faster, cleaner and truer. Nelson Savage says—"Now my saws cut better in every way than when filed by hand, though I was considered a good saw filer."

Easy and simple to operate. NO CANVASSING to get business. Other carpenters, schools, saw mills, factories, woodworking plants and many other businesses will give you all the work you can handle. Files all kinds of hand saws, band saws $\frac{1}{8}$ " to $4\frac{1}{2}$ " wide, and cross-cut circular saws 3" to 24" diameter. Uses standard taper files.

You can make BIG MONEY with the Foley—mail the coupon for complete information and FREE PLAN at once.

FOLEY SAW TOOL CO., INC.

136 Foley Bldg., 11 Main St., N. E. Minneapolis, Minn.

Please send me FREE PLAN showing me how I can start my own business and make BIG MONEY with the Foley.

Name

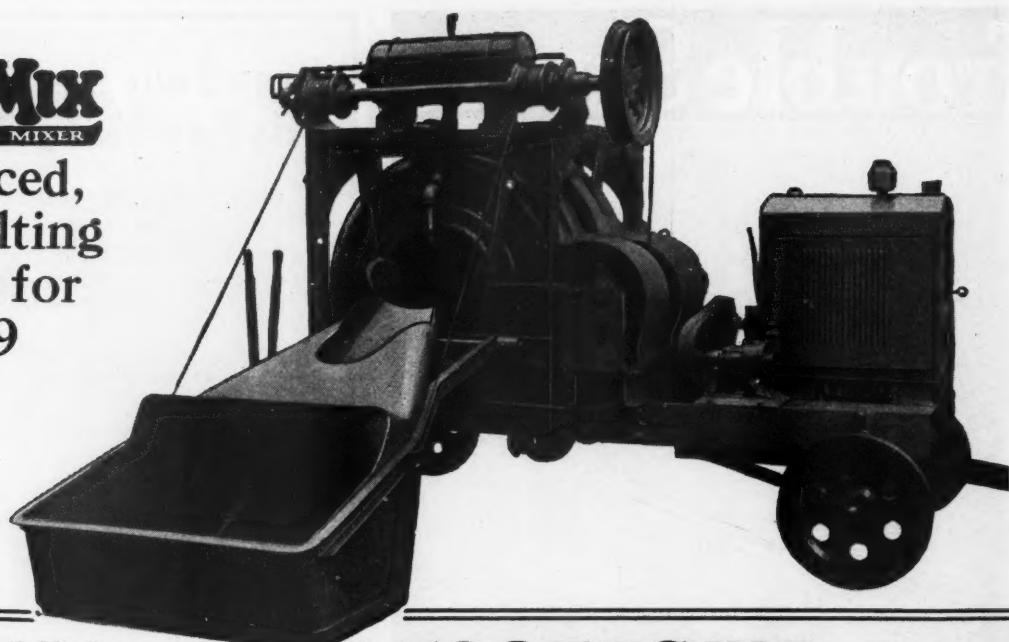
Street

City..... State.....

A.B. 12-23

Kwik-Mix
CONCRETE MIXER

Advanced,
Non-Tilting
Models for
1929



See the complete Kwik-Mix line
on exhibition at the Good Roads
Show in Cleveland, Ohio,
January 14th to 18th.

DISTRIBUTORS—We have good
open territory on our complete
line of tilting and non-tilting
mixers. If interested in a live
line of tilting and non-tilting
concrete, mortar and plaster
mixers, write at once for low
prices and liberal discounts.

LEADERSHIP

The greatest Kwik-Mix line ever put on the market is now being enthusiastically received by the concrete industry. These models incorporate many new time and labor-saving features with better mixing principles, high grade roller bearing drive with heavy duty, hot-riveted and electric welded steel drum and frame construction.

Write at once for complete description of all the latest improvements found in the new Kwik-Mix Non-Tilting line.

KWIK-MIX CONCRETE MIXER COMPANY
PORT WASHINGTON, WISCONSIN Dept. 100

"ANTI-HYDRO" Prevented Mortar From Freezing

This building was started late in the fall. Cold weather set in before it had proceeded very far.

"ANTI-HYDRO" was used for damp-proofing and waterproofing cement mortar in walls above grade. In addition to producing an absolutely dry job, "ANTI-HYDRO" also prevented the mixing water and the mortar itself from freezing. As a result there were no interruptions to work due to extremely cold weather.

It is far more economical and safe to use "ANTI-HYDRO" for waterproofing buildings while you are erecting them than to try to damp-proof them after they are completed. "ANTI-HYDRO" is extremely easy to use. It mixes easily with the water used in wetting down cement mortar and concrete.

For 24 years "ANTI-HYDRO" has proved its value as a permanent concrete hardening and waterproofing agent. Use it on your next job for guaranteed results.

ANTI-HYDRO WATERPROOFING Co.

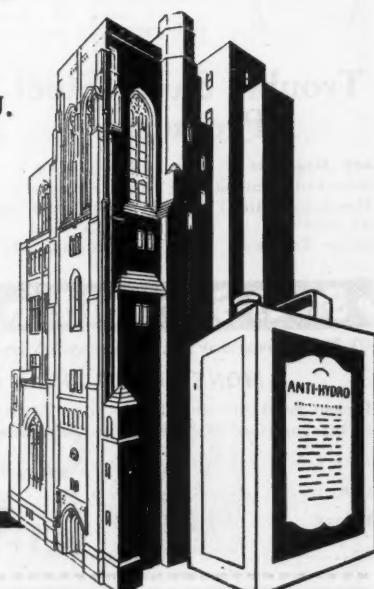
265-295 Badger Ave.

Newark, N. J.

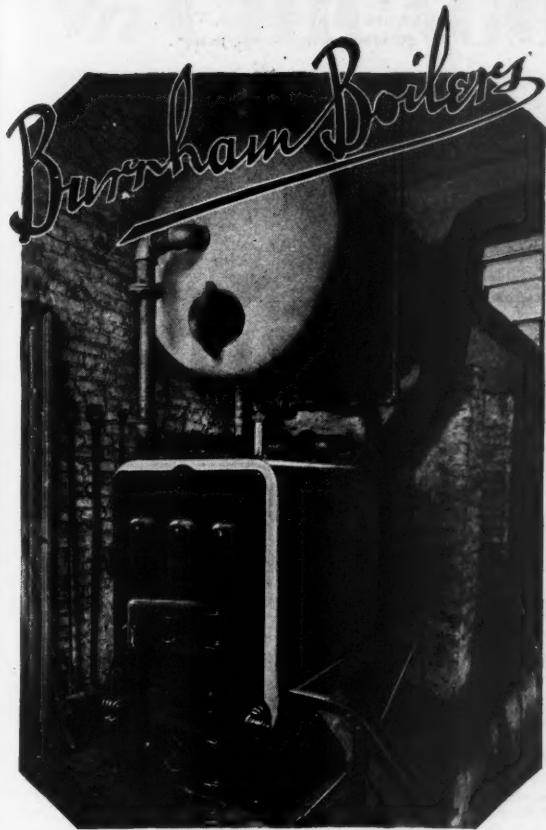


PARISH HOUSE OF FIFTH AVE. PRESBYTERIAN CHURCH
JAMES GAMBLE ROGERS ARCHT...JOHN DOWNEY Inc., BUILDERS

ANTI-HYDRO
FOR PERMANENT CONCRETE
WATERPROOF
HARDENS



FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



This is a high pressure hot water supply Burnham. Made also for low pressure.

Why we can't tell the truth about the savings of this Burnham Boiler

WE can't tell the truth, because you would say it was an untruth. But you can see for yourself that's a 1500 gallon water supply tank.

You can see that the boiler's fire box door is open. You know it's open to hold back the fire.

The photo, furthermore, was taken at the peak time when water is being used the most.

You can draw your own conclusions as to whether or not the Burnham delivers satisfactorily to this 70 family installation at 417 East 89th St., New York City.

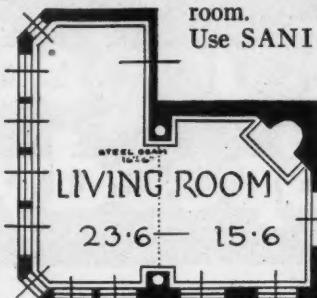
Burnham Boiler Corporation

Irvington, New York

Representatives in all principal cities of the United States and Canada

A WOMAN may look ever-so-carefully into this room and that. But, after all, it's her impresario of the kitchen that makes or loses the sale. And next in importance comes the bathroom.

Use SANI



ONYX, the *modern* wall material in both of these rooms. Fused from rock ingredients, it doesn't crack, chip, check or discolor. No repairs or redecoration. It means a certain sale!

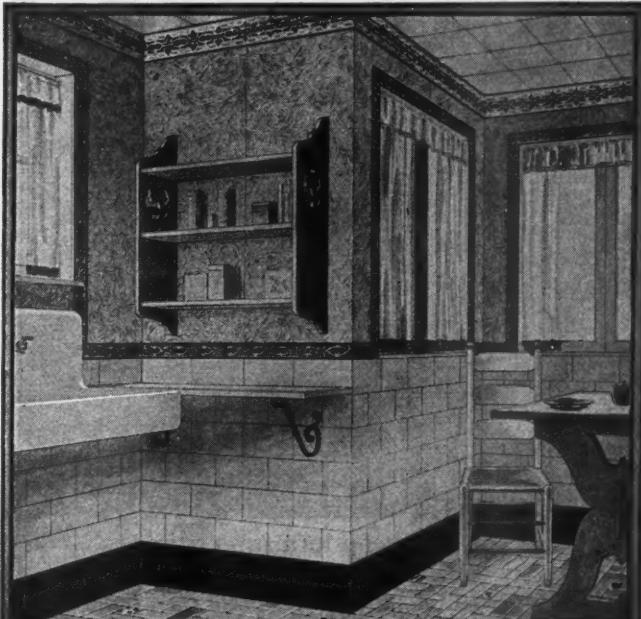


You ought to have this book; it tells all about SANI ONYX, and shows actual installations in full color. Write for your free copy.

We have some choice territory available for Construction Houses or representatives. Write us.

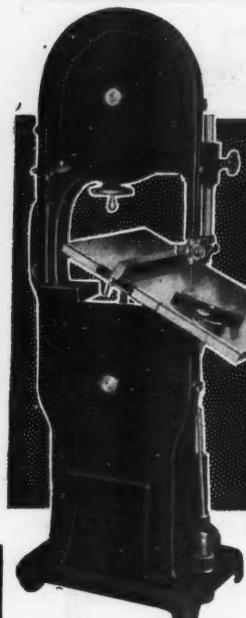


—but *THIS* is the ROOM that Sells Her—



SANI ONYX
A VITREOUS MARBLE

MARIETTA MANUFACTURING COMPANY
80 Brookside, Indianapolis, Indiana



Compact Rugged Speedy

20" Band Saw Every Contractor Needs It

You can save time and money with Gallmeyer and Livingston Union Woodworking machines. The work you are now turning out on bulkier, more expensive machines can be done with greater speed, and more economically with Unions.

Union Woodworking Machines are compact, and easily moved from one job to another. They will attach to any light socket.

In this day of keen competition, every contractor needs Gallmeyer and Livingston machines. They cut costs in many ways. They help you land more jobs. They cost less to buy and to operate. Insurance is less. There is less depreciation. You should know about the many advantages of Gallmeyer and Livingston Union Machines.

Send today for catalog and complete information. Free.

GALLMEYER & LIVINGSTON CO.
206 Straight Ave. Grand Rapids, Mich.

NAPANEE DUTCH KITCHENET

Built Like Fine Furniture

THOSE WHO ADD
"Napanee Equipped" to
their "For Sale" or "For
Rent" signs find that their
houses sell more quickly—
their apartments rent more
steadily.

For catalogs, specification
sheets, architectural service
and further information, write

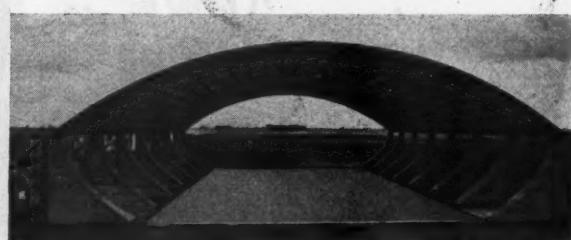
COPPES BROS. & ZOOK, Nappanee, Indiana

PLEASE ADDRESS DEPARTMENT AB 12

Sales Offices: New York, 415 Lexington Ave.
Chicago: Keehn Bldg., 308 North Michigan
Detroit: General Motors Building
Representatives in all principal cities

Manufacturers of a complete line of highest
quality kitchen cabinets, butler cabinets, re-
frigerator cabinets, broom closets, dish
cupboards, wall cupboards, etc.

Gymnasium at Corsicana, Texas,
80' x 100', under construction.



"LAMELLA" (PATENTED) Trussless ARCH ROOFS

Quickly and Economically Erected
Thoroughly Safe—Very Attractive

Good distribution of light, excellent acoustical
conditions.

Adopted for auditoriums, dance halls, garages,
warehouses, factories, etc., in all parts of the
country. Spans up to 150'.

Write nearest office for descriptive folder.

Lamella Roof Syndicate, Inc.
45 W. 45th St., New York City

Lamella Trussless Roof Co.
801 Kirby Bldg., Houston, Texas

Lamella Constructions, Inc.
801 Norris Bldg., Atlanta, Ga.

Missouri Lamella Roof Co.
904 Bank of Commerce Bldg.,
St. Louis, Mo.

DANDIE

KOEHRING

10-S



VALUE! High speed operation, liberal power, strong,
enduring, dependable construction—and still with-
in the price range for easily-portable mixers! Know
about its fast clean charging, thorough mixing, fast
discharge and ease of operation. Send for catalog D-1.

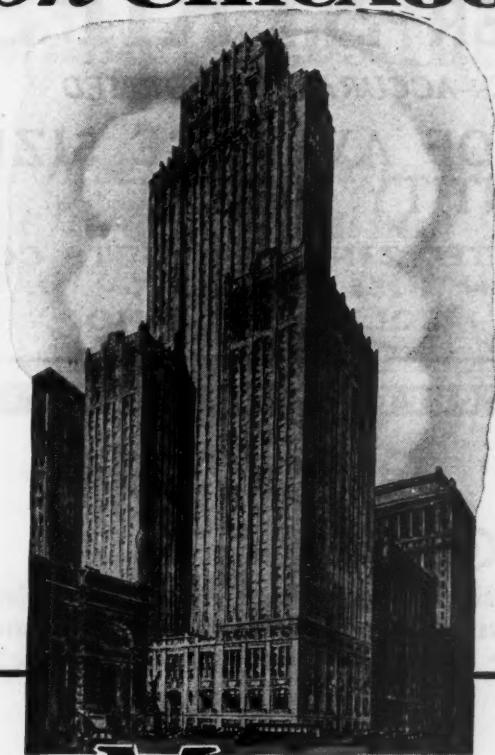
Dandie—5-S, 7-S, 10-S—5-S single
cylinder; 7-S and 10-S two or four
cylinder radiator cooled Ricardo
head gasoline engine. Rubber tires
with steel disc wheels or steel
rimmed wheels. Compiles with
A. G. C. Standards.

KOEHRING COMPANY, MILWAUKEE, PAVERS, MIXERS—GASOLINE SHOVELS, CRANES AND DRAGLINES

Sales Offices and Service Warehouses in all principal cities
Foreign Department—Room 579, 50 Church St., New York City
Mexico, F. S. Lapum, Cinco De Mayo 21, Mexico, D. F.

A45744

In CHICAGO



Solvay Calcium Chloride was used in constructing the Bankers Building. Architect, D. H. Burnham. Contractors, Dick Construction Co.

MANY great new achievements in concrete construction work have been made possible by the use of Solvay Calcium Chloride.

Solvay Calcium Chloride makes concrete construction in freezing weather a practical and profitable undertaking and has proved itself essential for making the best and strongest concrete.

Solvay Calcium Chloride makes concrete more workable, gives it great early strength and accelerates the set. Its use presents the most reliable method by which the concrete used for building construction can be satisfactorily cured.

Practical information on curing structural concrete is contained in the booklet, "Solvay Calcium Chloride in Concrete Construction." Send for booklet 1853.

SOLVAY SALES CORPORATION

*Alkalies and Chemical Products Manufactured by
The Solvay Process Company*

40 RECTOR STREET, NEW YORK

SOLVAY
CALCIUM CHLORIDE

Flake 77%—80%

Manufactured under United States Patents No. 1,527,121 and No. 1,592,971

THE IDEAL CONCRETE CURING AGENT



Here is SKILSAW (the original portable electric hand saw) that will save you time and money in sawing because it cuts wood ten times faster than the old fashioned hand saw. A fact—not a theory. This 10 lb., $\frac{1}{2}$ H. P. SKILSAW pictured here, will rip, cut and mitre any wood up to $1\frac{1}{2}$ " in a matter of seconds.

SKILSAW operates from any electric light socket and will work for you anywhere on the job because it is portable.

There are four models — cutting capacities 0" to $4\frac{1}{4}$ ". Let us show you without obligation on your part, what any model SKILSAW can do right on your own work.—Seeing is believing you know. Just sign and mail the coupon.



Show me how SKILSAW will save me time, money and muscle in sawing.

NAME _____

ADDRESS _____

CITY _____ STATE _____

SKILSAW INC
3822 Ravenswood Ave.
CHICAGO, ILL.

METAL WEATHER STRIPS

CORRUGATED AND PLAIN RIB TYPE—ACCURATELY FORMED

39 CENTS PER OPENING OF AVERAGE SIZE
ON QUANTITY ORDER.

OUR NEW QUICK INSTALLATION FEATURE
WILL SAVE YOU MONEY. SAMPLES
AND FULL PARTICULARS ON REQUEST

UNITED ZINC PRODUCTS CO.
954 N. HIGH ST.
COLUMBUS, OHIO

ACCEPT NO SUBSTITUTE

BOYLE'S BAYONNE *ready to lay* Roof and Deck Cloth



The ideal covering for Porch Floors, Decks or Piazzas, Sun Parlors, etc.

Waterproof
Weatherproof
Durable
Flexible

Lays flat
Stays flat

Ready to lay—Requires no white lead bedding; will not buckle, crack or peel.

Write today for our Sample Booklet "P."

JOHN BOYLE & CO. Inc.

Established 1860

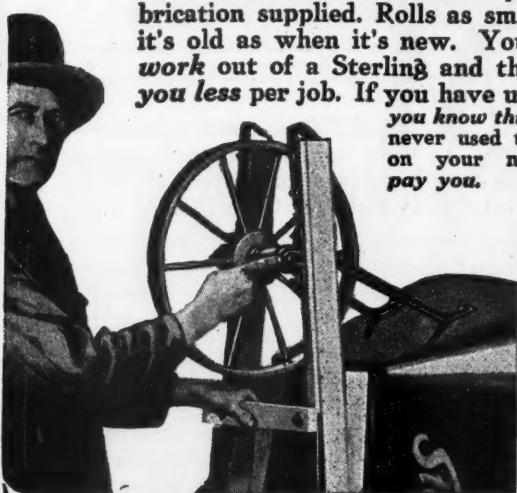


112-114 Duane St.,
1317-1319 Pine St.,

New York
St. Louis, Mo.

Sterling

—“self-lubricating” axle bearing—
guaranteed for the barrow's life—means
longer service and easier wheeling.



No oil service ever needed—permanent lubrication supplied. Rolls as smoothly when it's old as when it's new. You'll get more work out of a Sterling and they will cost you less per job. If you have used Sterlings you know this—if you have never used them try them on your next job—it'll pay you.

Sold by leading dealers. Complete warehouse stocks at—Chicago, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, St. Louis.

STERLING WHEELBARROW COMPANY

Milwaukee

Wisconsin

LUFKIN TAPES and RULES

The "Universal" is an Accurate Steel Tape at a popular price. Line is 3/8" wide, standard weight. Case is sturdy, and of good appearance.



Send for Catalog



Our Folding Aluminum Rules are furnished with or without hook. All joints and fittings are solid brass, making the rule rust-proof throughout.

THE LUFKIN RULE CO. SAGINAW, MICH.
New York • Windsor, Ont.

Sana-bestos Tiles

PATENTED

for

*Homes, Apartments,
Schools, Churches,
Stores and Hospitals*

are:

**DURABLE
ECONOMICAL
COMFORTABLE
CLEAN—**



SANA-BESTOS FLOOR TILES cost less than other types of approved flooring. They are easily and quickly laid in plastic cement by the average workman.

This modern indestructible flooring is moderate in first cost with no upkeep expense. It is not affected by acids or alkalines. Ink stains and marks of cigarettes are easily removed by washing with soap and water.

Sana-bestos Floor Tiles will not buckle, crawl, warp, wrinkle, loosen or turn up at the corners. The comfortable, non-slippery, resilient surface is not affected by traffic no matter how severe. The floor never wears rough or gritty.

Sana-bestos Floor Tiles offer a variety of color tones, including Black, Maroon, Red, Brown, Green, that harmonize with any artistic layout. (Sana-bestos Tiles cannot be manufactured in light colors.)

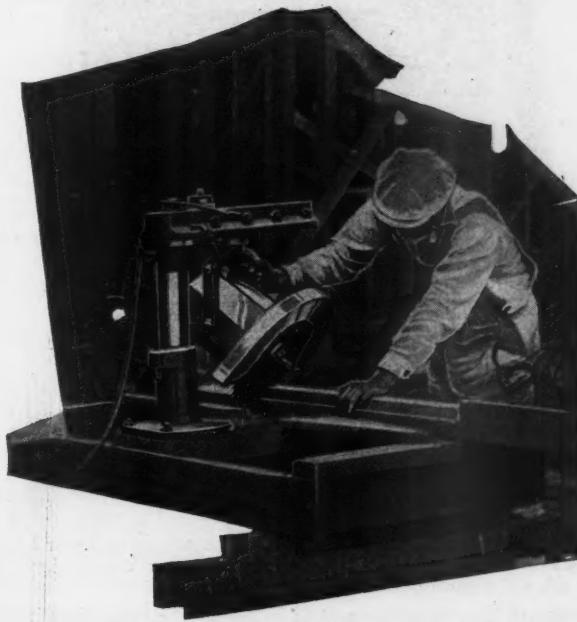
*Sample tile and descriptive literature
sent upon request*

FRANKLYN R. MULLER, Inc.

Manufacturers of Asbestone and Sana-bestos Tiles

212 Madison St. Waukegan, Illinois
Established 1906

**Save Yourself
1 Hour in Every 3**



*DeWalt complete with table, motor, switch and saw—
Motor from 1 to 5 hp.*

ON the average job $\frac{1}{3}$ of every day is spent on profitless, back-breaking hand sawing.

With a DeWalt, however, you can use your skilled carpenters a full day on profitable work. They like it better and so will you.

Over 4,000 DeWalt users know how to get, and are getting, that *extra profit*. Let us show you what we mean by *extra profit* right on your own job.

DEWALT

Wonder Worker

The Economy Wood Worker

DE WALT PRODUCTS CO.
677 New Holland Ave., Leola, Pa.

I'd like you to demonstrate how the DeWalt will make money on our job.

Your name.....

Firm name.....

Address.....

Type of Business.....



THIS BIG-FIGURE CALENDAR, containing thirteen sheets 20 by 28 inches will be sent with our compliments if you ask for it promptly.

Thirteenth sheet shows complete calendars for 1928, 1929, 1930.

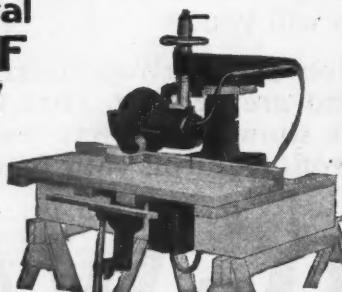
ALPHA PORTLAND CEMENT COMPANY

Baltimore, Battle Creek, Mich. Birmingham, Ala.
Boston, Chicago, Easton, Pa. Ironton, Ohio
New York, Philadelphia, Pittsburgh, St. Louis

CRESCE

Universal
CUT-OFF
SAW

Will
Make Money
for You
Out on the Job



YOU need this portable handy machine to help you do more work, more easily, in less time, at greatly lower costs. Accurate, speedy; quickly and easily adjusted from straight cutting off to cut miters, bevels, rout stair stringers, under cut jack rafters, do tenoning, dadoing and many other operations.

This is an efficient, practical and safe machine, moderately priced.

Send for Circular

The Crescent Machine Co.
224 Main St., Leetonia, Ohio

We Also Build—

Band Saws
Saw Tables
Self Feed Rip Saw
Shapers—Jointers
Variety Woodworker

Planers
Planers and Matchers
Disk Grinders
Cut-off Table
Swing Saws

Borers—Tenoners
Hollow Chisel
Mortisers.
Universal Wood
Worker

ALUMINUM GENERAL PURPOSE (90 lb.) FLOOR SANDER

Latest Model—
Just Out!

Built for
GREAT SPEED and
HIGHEST QUALITY
of work



No vibrations—no dust
—no chains—no belts.
Roller sands even with
wall on either side
of machine. 9" long
roller 1-3/4 HP AC &
DC motor.

Write for price

WAYVELL CHAPPELL & CO.
36 Jackson St., Dept. Z., Waukegan, Ill.

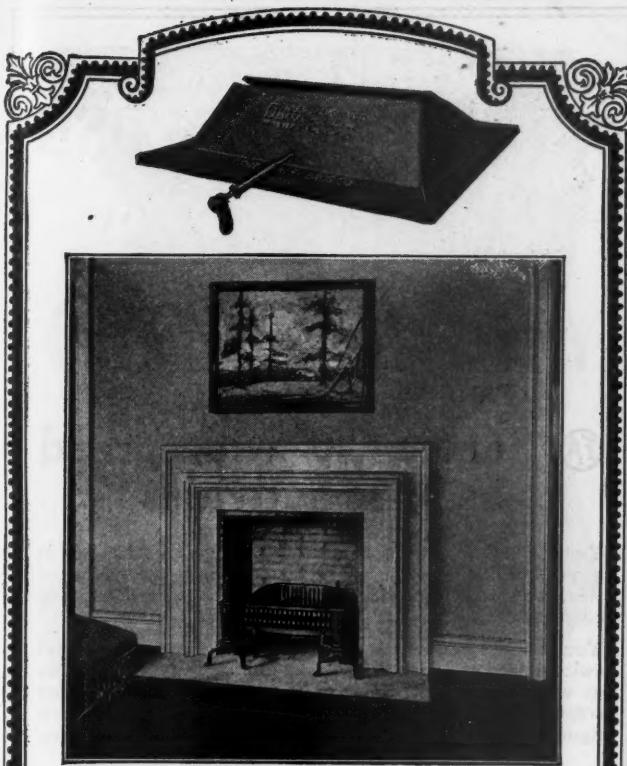
Adamston
Vertically Drawn Flat Glass

Perfectly
Flat



A brand you
can depend upon.

ADAMSTON FLAT GLASS COMPANY
CLARKSBURG, W. VA.



60 Fireplace Designs to Choose from!

WHEN customers want to select a fireplace design for the new home, show them these 60 beautiful new designs, some in wood, others in brick, stone and combinations of these materials. Among them are designs for living room, dining room, bed room, etc.

These designs are found only in the Donley Book of Successful Fireplaces—the most complete book on fireplaces published today. In addition to designs, it gives details for building fireplaces that you can guarantee will not smoke and will have perfect draft control. It explains how to correct and avoid all fireplace troubles. It describes Donley Fireplace Equipment used in building truly successful fireplaces.

Every builder should have this book. Your copy will be sent upon receipt of 25 cents to cover cost of mailing.

The Donley Brothers Co.
13910 Miles Avenue • • Cleveland, Ohio



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Reading Architects' BLUE PRINTS



Learn at Home!

THE building trades are booming. Employers everywhere are looking for men who can read architects' blue prints. Splendid salaries and rapid advancement are offered men who have this special training.

There is an easy, delightful way to learn. The International Correspondence Schools will teach you right at home in an hour a day of the spare time that now goes to waste.

You will like the course because it is so PRACTICAL. You work on actual blue prints—the same blue prints a contractor would use if asked for an estimate, or a foreman would receive from a contractor.

In a surprisingly short time you can acquire a knowledge of blue prints that will be of great value to you in a salary way the rest of your life.

Mail the Coupon To-day!

INTERNATIONAL CORRESPONDENCE SCHOOLS

"The Universal University"

BOX 8126-D

SCRANTON, PA.

Without cost or obligation, please send me a copy of your booklet, *Who Wins and Why*, and full particulars on the subject before which I have marked X:

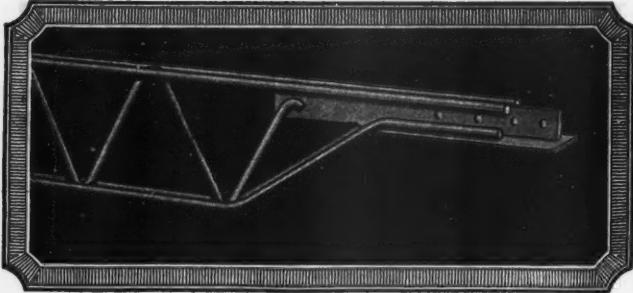
<input type="checkbox"/> Architect	<input type="checkbox"/> Business Management
<input type="checkbox"/> Architectural Draftsman	<input type="checkbox"/> Navigation
<input type="checkbox"/> Architects' Blueprints	<input type="checkbox"/> Salesmanship
<input type="checkbox"/> Contractor and Builder	<input type="checkbox"/> Advertising
<input type="checkbox"/> Building Foreman	<input type="checkbox"/> Window Display
<input type="checkbox"/> Concrete Builder	<input type="checkbox"/> Show Card and Sign Lettering
<input type="checkbox"/> Structural Engineer	<input type="checkbox"/> Industrial Management
<input type="checkbox"/> Structural Draftsman	<input type="checkbox"/> Secretarial Work
<input type="checkbox"/> Plumber and Steam Fitter	<input type="checkbox"/> Business Correspondence
<input type="checkbox"/> Heating and Ventilation	<input type="checkbox"/> Bookkeeper
<input type="checkbox"/> Plumbing Inspector	<input type="checkbox"/> Stenographer and Typist
<input type="checkbox"/> Foreman Plumber	<input type="checkbox"/> Higher Accounting
<input type="checkbox"/> Sheet Metal Worker	<input type="checkbox"/> Common School Subjects
<input type="checkbox"/> Civil Engineer	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Surveying and Mapping	<input type="checkbox"/> English
<input type="checkbox"/> Electrical Engineer	<input type="checkbox"/> Illustrating
<input type="checkbox"/> Electric Lighting	<input type="checkbox"/> Railway Mail Clerk
<input type="checkbox"/> Electric Wiring	<input type="checkbox"/> Civil Service
<input type="checkbox"/> Telegraph Engineer	<input type="checkbox"/> Mining Engineer
<input type="checkbox"/> Practical Telephone	<input type="checkbox"/> Gas Engine Operating
<input type="checkbox"/> Mechanical Engineer	<input type="checkbox"/> Textile Overseer or Sup't.
<input type="checkbox"/> Mechanical Draftsman	<input type="checkbox"/> Traffic Manager
<input type="checkbox"/> Toolmaker	<input type="checkbox"/> Airplane Engines
<input type="checkbox"/> Machine Shop Practice	<input type="checkbox"/> Automobiles
<input type="checkbox"/> Stationary Engineer	<input type="checkbox"/> Agriculture
<input type="checkbox"/> Chemist	<input type="checkbox"/> Poultry Raising
	<input type="checkbox"/> Spanish
	<input type="checkbox"/> French
	<input type="checkbox"/> Radio

Name.....
Street and No.....

City..... State.....

Occupation.....

If you reside in Canada, please send this coupon to International Correspondence Schools Canadian, Limited, Montreal, Canada



Nailer Joists

STEEL Joists that are built into Apartments—Stores—Garages Office Buildings — and Homes at a slight increase in cost over ordinary construction. No springy floors. No cracked ceilings.

The added sales value more than offsets the additional cost. Alert realtors will feature the Massillon Nailer Joist as a distinctive feature of their 1929 building program.

You, too, can cash in on this distinctive floor construction. Let us put you in touch with our nearest representative or send us your plans.

THE MACOMBER STEEL CO.

909 Belden Ave., Canton, Ohio

THE IMPROVED SCHLUETER

Will Out-Surface It!

TAKE any other surfacer. Stack it up against the Improved Schlueter on any job. Work them both eight hours a day. You'll never use any other but the Improved Schlueter after such a test. You'll know what your friend meant when he said "The Schlueter's got the guts to work all day long, day after day, and do the work right."

Write for details of FREE TRIAL offer. Learn what *automatic* Floor Surfacing really means.



LINCOLN-SCHLUETER
FLOOR-MACHINERY CO., INC.
223 W. Grand Avenue, Chicago, Ill.



GREATEST OF THEM ALL

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



FA Service as widespread as your activities

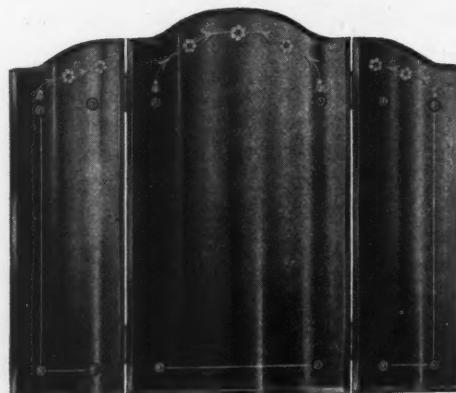
You will always find FA facilities wherever the job is located. The experienced architect knows the value of this, whether his activities be confined to a small area or country wide.

You can call in FA sales engineers, men of panelboard and switchboard experience from any one of thirty-one offices as well as the main office at St. Louis. These men are schooled and equipped to estimate accurately, basing their figures on known costs, giving always the right price first.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

OFFICES IN THIRTY CITIES

HESS CABINETS and MIRRORS *Snow-White Steel*



THE ELITE
Another Hess Cabinet.

THE center Venetian mirror conceals a large cabinet with polished plate glass shelves. The wing mirrors are attached with nickel-plated brass hinges, to swing at any angle.

A beautiful cabinet—in keeping with other Hess Products—suitable for the finest bath room.

Price moderate. Ask for illustrated folder.

HESS WARMING & VENTILATING CO.

Makers of Hess Welded Steel Furnaces
1220 S. Western Avenue, Chicago.

The Fastest Thing
 for RUBBING
 DOWN CONCRETE

The
Carborundum
REG. U.S. PAT. OFF.
 RUBBING
 BRICK

*It's Fluted*

THE most effective tool available for rubbing down concrete surfaces, for quickly removing mould or form mark leaves a smooth, clean finish.

The flutes give a decided shearing action and carry away the removed material.

Made of genuine Carborundum, the manufactured abrasive; cuts faster, finishes more smoothly and lasts longer.

MADE IN FOUR SIZES

No. 284—8 x 3 x 3 inches
 No. 285—8 x 2 x 2 inches

No. 286—6 x 2 x 2 inches
 No. 287—4 x 2 x 2 inches

FROM YOUR HARDWARE DEALER OR DIRECT

By request of hundreds of workmen, we have produced No. 288, size 8 x 3 1/4 x 1 1/2, with stout wood handle securely cemented to the fluted brick.

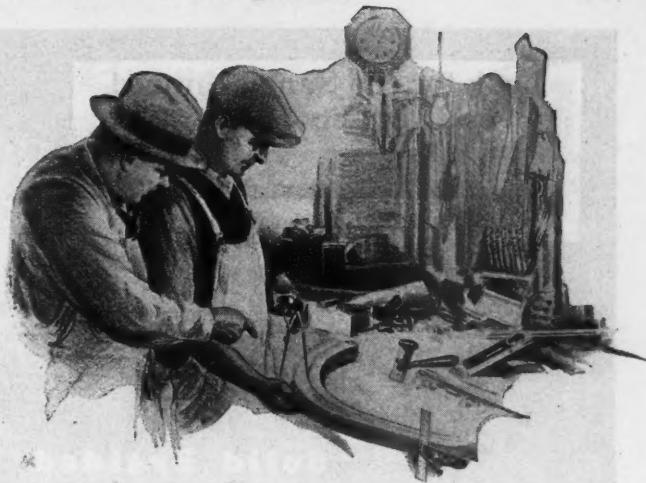
Handier with the Handle



Carborundum is the Registered Trade Mark of The Carborundum Company for its Silicon Carbide and is its exclusive property.

THE CARBORUNDUM COMPANY
 NIAGARA FALLS, N. Y.

CANADIAN CARBORUNDUM CO., LTD., NIAGARA FALLS, ONT.



**Starretts make
 good work easier**

Take the Starrett No. 94 Combination Square, for example, eight everyday tools in one,—a marking gage, rule, try square, mitre, depth gage, height gage, level and plumb. It's typically Starrett in quality, workmanship and all around usefulness.



Starrett
 Dividers
 No. 92

The extra weight of the No. 92 Dividers gives a balance which makes them mighty easy to hold on a mark. Your hardware store has these and other convenient Starrett Tools. Drop in today and ask for the ones you need.

Write us for your free copy of the new Starrett Catalog No. 24-6 illustrating and describing more than 2500 Starrett Tools.

THE L. S. STARRETT CO.

World's Greatest Toolmakers
 Manufacturers of Hacksaws Unexcelled
 Steel Tapes—Standard for Accuracy
 ATHOL, MASS., U. S. A.



Starrett Combination Square No. 94

Use Starrett Tools

Look for the Name Stamped
on Every Foot of Cord

SILVER LAKE

Silver Lake Co., Newtonville, Mass.



Solid Braided 100% Cotton

LARGE PROFITS
ASSURED
BY
USING
THE
NEW

The Tie is at the Rib

Metal Lath Hanger "TIE-TO" INSERT

This simple and efficient insert when installed ready for lathing costs about a third as much as any other available contrivance which means a saving of \$3,000 to \$4,000 on a ten thousand yard metal lath installation.

One man can lay 500 ft. an hour in a $\frac{3}{8}$ -in. ordinary saw cut in the form soffit. A saving of 25c to 40c per sq. yd.

"TIE-TO" INSERTS are made of heavy galvanized 11 ga. wire. Anchor loops $1\frac{1}{4}$ in. in diameter, spaced 6 in. centers, 500 lin. ft. per carton, weighing 37 lbs.

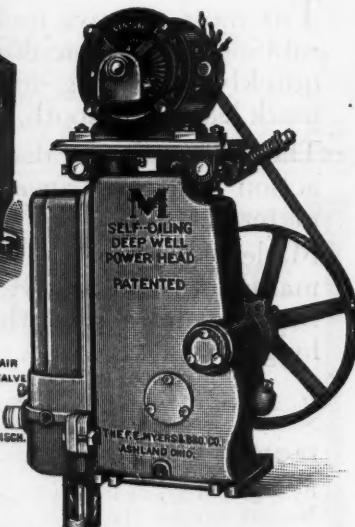
872 Layton
Blvd.

TIE-TO
INSERT CO.

Milwaukee
Wis.



Positive lubrication
houses working parts,
improved method of
power application, extra
large valves, unrestricted
waterways, these and
other equally important
features reduce operation
costs to the minimum
and increase efficiency to
the maximum.
Ask for catalog and in-
formation.



THE F. E. MYERS & BRO. CO., ASHLAND, OHIO
Pumps—Water Systems—Hay Tools—Door Hangers

THESE WINDOWS WILL MAKE A PROFIT!



Residence Casement

DEALERS are making money in handling Bayley-
Springfield Steel Windows. Designed for all types
of buildings. Bayley construction features make for great
strength and economical installation, and are the result
of 45 years' experience in architectural ironwork. Carried
in stock so that a dealer's turnover makes the Bayley
line an attractive proposition.

THE WM. BAYLEY COMPANY
128 West North Street SPRINGFIELD, OHIO
Sales Offices and Warehouses in Principal Cities

**Bayley-Springfield
Steel Windows**



Windows for Basements
The Bayley Window for basements in
residences, apartments and other buildings.
Fine for side walls in garages and
small buildings. Cost no more than
wood, yet give 50 per cent more light
made in four standard sizes.



*This Mark
on a frame
is recognized as an emblem of supreme quality*

To the thousands upon thousands of builders who during the past thirty years have learned that there is practically no limit to the perfect service given by Grand Rapids pulleys, there is nothing that so definitely establishes the quality of a frame as the above insignia—a potent, powerful selling factor.

Grand Rapids Hardware pulleys are guaranteed trouble-proof. Perfectly uniform, they always fit the mortise. They never break. Furnished in Ball Bearing, Cone Bearing, Axle Bearing types and made of heavy wrought steel in various weatherproof finishes.

Catalog, samples and prices gladly furnished on request.

Grand Rapids Hardware Co.
556 Eleventh St.
Grand Rapids, Michigan



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Gimco
ROCK WOOL

Insulation

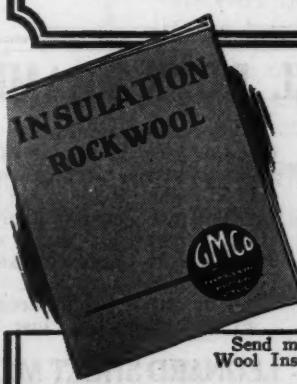
The low cost and ease of application of Gimco Rock Wool gives it preference over any other insulation. It not only insulates against cold and heat, but also against Fire, water, vermin and Sound.

This silica rock is found only at one place—Alexandria, Ind., U.S.A.

Three Convenient Forms

1. **LOOSE ROCK WOOL**—Light, fluffy and easy to handle. Packed in handy 50-pound bags.
2. **FELTED ROCK WOOL (Flexfelt)**—Easy-handling, blanket-like form, fabricated between metal lath, providing stucco or plastering base.
3. **Granulated Rock Wool**—Loose Rock Wool ground into uniformly small particles. Ideal for hard-to-get-at applications.

Ask your building supply dealer about Gimco Rock Wool. If he doesn't handle, write us direct.



General Insulating
& Mfg. Co.
ALEXANDRIA, IND.

*Send for this
New Book on
Insulation*

Send me copy of free book on Rock Wool Insulation.

Name.....
Company.....
Address.....

The only machine that you can tilt the table to 45° without removing insert. Big advantage on pattern work.

18 Tools In One



Price
Includes
1/8 H.P.
A.C.
Motor

{ 1/8 H.P. Motor-40°-100% overload
Double Shaft Extension }

-FREE-
\$5.00 Book of
Blue Prints
Showing 46
PRIZE PROJECTS
with Purchase.

\$35
F. O. B.
CHICAGO

Write for Complete
Illustrated Folder—
Dealers Wanted. (Please attach to fit on table top will smooth
pieces up to 2 inches wide, \$10 extra.)

S & B-8" COMBINATION SAW

GREATEST MACHINE YOU EVER SAW!

Money Back
Guarantee
12" Band Saw

Sent to You on 15 Days' Approval

THE S & B 8-in. COMBINATION SAW (18 tools in one) is the ideal machine for the shop, factory, or the home; will rip, cross cut, bevel, miter, mortise, groove, drill, tenon, grind, rabbet, buff and polish. Motor is mounted on a base that is a part of the machine proper. Run from any light socket, also provides for other purposes when the saw is not in use. Complete with attachments and price includes 1/8 H.P. Motor, 60-Cycle, 110-Volt A. C. Price \$35.00 F. O. B. Chicago. Shipping weight 100 lbs.

SCOTT-BANSBACH MACHINERY CO.
130 So. Clinton St., Dept. 98 CHICAGO, ILL.

\$35.00 F. O. B. Chicago without Motor

12" Band Saw
Positively a sun-
sation and at this
LOW PRICE you
can now do the
1001 things you
wanted quickly
and easily. This
12" BAND SAW
has a tilting
table with Miter
and sturdy
ideal for
the shop
or home.
Motor \$15
extra.



The FARRAND Rapid Rule

There is something new in crafts-
men's fine tools.
It is this RAPID RULE—a good
rule that works both ways.
Measure vertical or horizontal
surfaces. *It is rigid.*
Measure around corners or cir-
cumferences. *It is flexible.*

Coiled in a neat, nickel-plated cup—a dignified
companion for your watch, this six-foot measuring
instrument is instantly ready to spring forth
to serve you—to do for you all things
which you have heretofore demanded
of both wooden rule and steel
tape. It possesses great speed
and is unusually accurate.
Six feet of the world's
best steel, nickelized,
highly polished, and
the figures easily
read in dim
corners.

A
Modern
Tool for
Modern Craftsmen

Rules Now Made in the Following
Scales:

72 inch with 1/16 inch graduations
6 feet with 1/100 foot graduations
2 meters with millimeter graduations

Price \$5. Ask Your Dealer or Write

H. A. Farrand, Mfr., Room 639A, 149 Broadway
New York City



72 inch with 1/16 inch graduations
6 feet with 1/100 foot graduations
2 meters with millimeter graduations

Price \$5. Ask Your Dealer or Write

H. A. Farrand, Mfr., Room 639A, 149 Broadway
New York City

SISALKRAFT

"SISALKRAFT is the building paper."

THE SISALKRAFT CO.

1000 St. Wacker Drive
Chicago, Illinois
Local Stations

THE CAGG

AB-19—Gray

ROLLED STEEL DOOR FRAMES WILL INCREASE YOUR PROFITS

The combination buck jamb and trim eliminates separate
wood or steel bucks, jams and trim and thereby reduces erection
costs two-thirds as the entire unit is installed at one time.

Cold rolled of 16 gauge steel—it withstands and absorbs the
shock of the heaviest door.

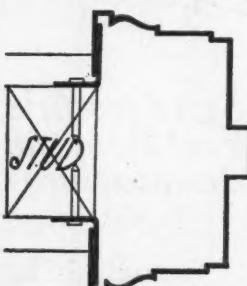
Units made for single or double doors, transom openings,
etc. Jams reinforced securely and drilled and tapped for
application of hardware.

Furnished in prime coat ready for finish painting.
Prompt shipment, low in cost and easy to install.

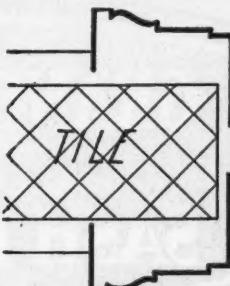
LEONARD SHEET METAL WORKS, HOBOKEN, N. J.

Established 1900

Representatives in: Atlanta, Georgia, Charlotte, N. C., Durham, N. C., Richmond, Va., Washington, D. C., Philadelphia, Pa., New Haven, Conn., Rochester, New York, Buffalo, New York, Cleveland, Ohio, Dayton, Ohio, Cincinnati, Ohio, Memphis, Tenn., Norfolk, Virginia.



Showing buck applied
to wood stud



Showing buck applied to
hollow tile partition

NEARLY 2,200 BUILDERS ARE NOW USING

THE CARTER DOOR SET

OVER 300 OF THESE HAVE ORDERED THEIR SECOND SET OR MORE

CONVINCING—ISN'T IT?

Man Energy Tires—Electric Energy Never Tires. Then Fit—Hinge—Mortise and Cut for Face Plates—Electrically

IN the construction of the new Edgewater Beach Apartment Hotel, Chicago, three Carter Door Sets were used, which not only affected a tremendous saving in time and man energy, but made possible a degree of finish and accuracy that is practically impossible by the old method.

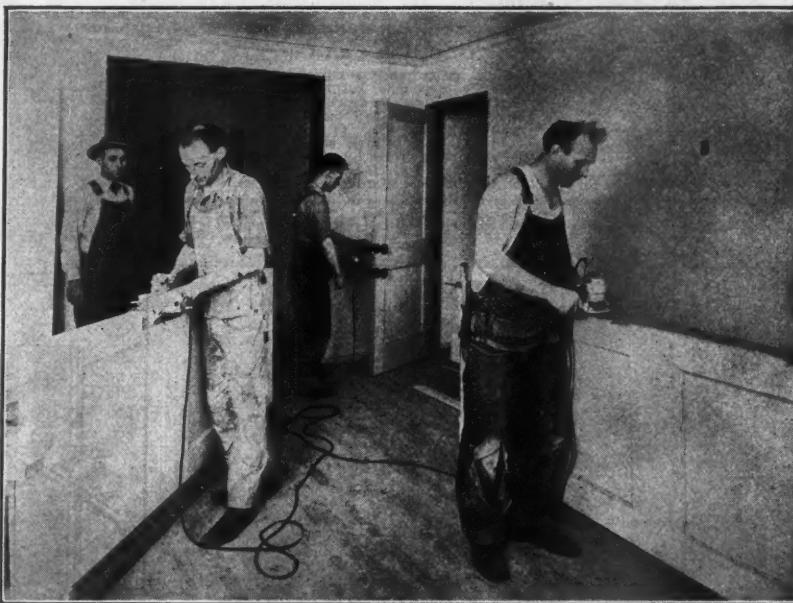
With the Carter Power Plane the edges are always smooth and flat, due to the speed of 18,000 R. P. M. and the Spiral Cutter.

A Templet for Butt Cutting (same Templet for Doors and Jambs) means no mistakes—ever.

The Mortiser cuts in the centre of the door always—regardless of thickness—fast and smooth.

There's a Templet for Lock Face Plates and Transoms, too, using the Hinge Butt Router. (All Templets fully adjustable.)

FOLDER "A" DESCRIBES
THE ONLY DOOR SET



Courtesy—H. B. Marshall Construction Co., Chicago

THE R. L. CARTER CO., 1291 Chestnut St., Phoenix, New York

For Floor Surfacing— BEHR-MANNING DURUNDUM PAPER—

Every Floor Surfacer who ever used Durundum Paper has remained an enthusiastic booster for it. And the reason is easy to find. The test of even a single roll of Durundum proves, at once, its faster cutting speed, its exceptionally long life, and its extremely fine finishing qualities—all of which mean ECONOMY—LOWER COSTS—AND LARGER PROFITS.

**BEHR-MANNING • TROY
CORPORATION • NEW YORK**



The Triangle Trade Mark identifies every roll of Behr-Manning Durundum Floor Paper.

Use the coupon to get detailed information and prices.

BEHR-MANNING CORPORATION

P.O. DRAWER 74, TROY, N.Y.

NAME _____

STREET _____

CITY _____ STATE _____



Sand more square feet with Speedmatic "8"

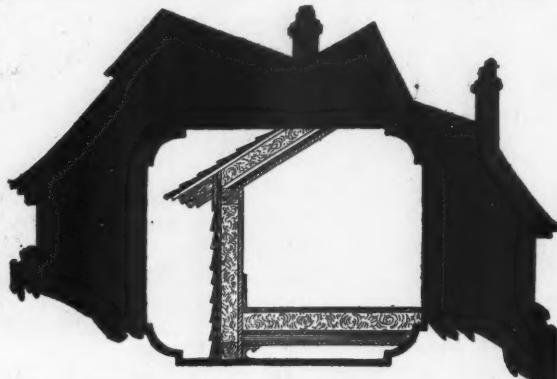
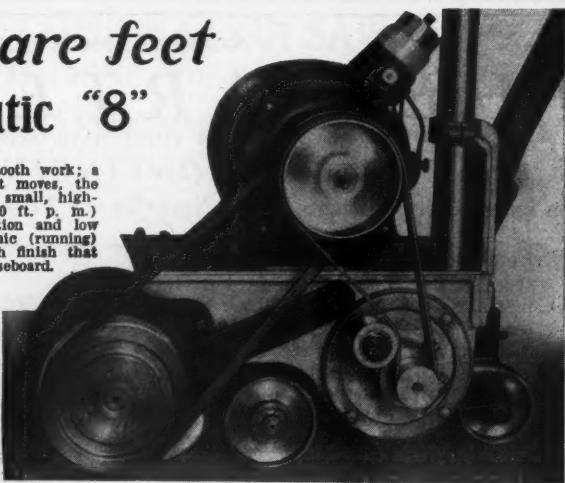
Designed particularly to give large coverage of smooth work; a machine that can be carried by one man on short moves, the Speedmatic "8" is a real production machine. The small, high-speed 8" drum (revolves at a surface speed of 2300 ft. p. m.) gives fast, clean cutting with a minimum of friction and low abrasive cost. The "floating" drum with its dynamic (running) balance and shock absorbing springs, gives a smooth finish that pleases the most critical. Sands within $\frac{1}{8}$ " of baseboard.

One Man Can Carry It

Without motor and auxiliary weight, machine weighs only 75 pounds, but for short moves, it can be carried by one man without removing motor. Dustless operation—ball bearing throughout—runs off wall plug.

Because of these features and the moderate price, it is an excellent machine with which to start a paying floor surfacing business and one those established cannot afford to be without. Investigate!

Porter-Cable Machine Company
1721 N. Salina St. Syracuse, N. Y.



MINERAL WOOL The Perfect Insulator REDUCES UPKEEP

The proper insulation of any building is a real economy and an added comfort. Mineral Wool has conclusively proven to builders and home owners that its insulating qualities are exceptional and the cost insignificant for the advantages it supplies.

It keeps out both summer heat and winter cold and the saving it effects in winter fuel will pay for installation cost within a short period.

It is indestructible, vermin-proof and sound-proof and reduces the hazard of fire.

Sample and illustrated booklet on request.

U. S. MINERAL WOOL COMPANY
280 Madison Avenue, New York
Western Connection:
COLUMBIA MINERAL WOOL CO.
South Milwaukee, Wisc.



No matter how many years after, Structural Slate will always be in first class condition. It is this "Outlasts-the-Building" feature that places it in the specifications of the leading buildings of the country.

Beautiful, Durable, Economical Structural Slate! Its possibilities are unlimited—Stairways, Toilet Enclosures, Shower Stalls, Fireplaces, Store Fronts, Bases, Wainscots, Caps, Floors, etc.

THE STRUCTURAL SLATE CO.
1204 ROBINSON AVE., PEN ARGYL, PA.



"YANKEE" RATCHET BRACE NO. 2100

SIZES

8, 10, 12 and 14"
SWEEP

A postal will bring
you our Tool Catalog

*Please mention
this magazine*

NORTH BROS. MFG. CO., PHILA., PA.

The New "YANKEE" No. 2100

*Is Made for Those Who Appreciate the Best.
Built Like a Precision Tool*

There has never been a brace like it—works like a watch—but unbreakable. Dust-proof! Moisture-proof! Quick, positive shifter. The chuck is a two jaw and holds any bit (round, square or taper) up to $\frac{1}{2}$ " capacity. Handles of hard rubber. Won't warp, shrink, crack or bind. Top handle is ball-bearing.

*Must Be Handled To Be Appreciated.
Have Your Dealer Demonstrate It To You.*

A NEW MODEL WODACK SAW \$95.00



Taking a Model "C" to the Lumber

Cuts Up To 2 $\frac{5}{8}$ "

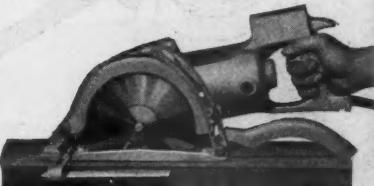
Model K—a one-hand saw with power to rip or cross-cut fast and true. One week's use will pay for it. Connect up to some nearby light socket and end hard work.

4 Models to Pick From

Model B cuts up to 4 $\frac{1}{2}$ " with 11" diameter blade. Has tilting base for bevel cuts up to 60°—our most complete hand saw. Very handy for rafter cuts or any other sawing.

Ask for demonstration

F. L. ROGERS & CO.
23 S. Jefferson St., Chicago, Ill.
Also New York City



Model "K"

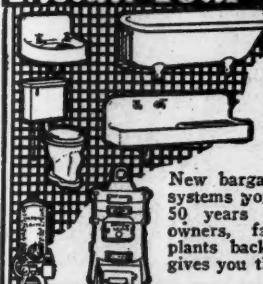
Weight, 15 lbs. Saws from 9 in. to 2 $\frac{5}{8}$ in.
1/2 h.p. G.E. Universal Motor.

110 volts for both A.C. and D.C.

WODACK perfect Safety Guard—Saw-dust Blower
—Rip Gauge—Depth Gauge—8-in. combination
saw blade. STEEL CARRYING CASE.

PLUMBING-HEATING

Install Your Own ~ ~ Save Half



Lowest wholesale prices on Highest Quality, Grade A goods. Any Handy Man can install his own Plumbing and Heating BY OUR NEW EASY METHOD. Get the best and pay only a little each month.

Send for FREE book

New bargain catalog just issued. With our cut-to-fit systems you save waste material and high labor cost. 50 years of economical service to builders, home owners, farmers, and mechanics. Million Dollar plants back up our Bonded Guarantee. FREE book gives you the whole story. Write for your copy today.

OVER 50 YRS. **HARDIN-LAVIN Co.** EST. 1876
120-30 West Pershing Road, Chicago, Ill.

You Can Chalk up the Profits on any Slate

BUT You Want **Genuine** By this Mark. **GFT** Clear Black Slate
Genuine Franklin Tunnel

To Give LASTING ROOFS and PROFITS
Worth "Chalking" About

First Quality, Reasonable Prices, Good Profits
Write for Samples and Information
SLATINGTON SLATE CO., SLATINGTON, PENN.

"They Stay in Commission"

You need this catalogue to pick the drill you need.

Eleven sizes—1/8 inch to 7/8 inch. Super performance.

"More Service—Less Servicing"
Write for catalogue today.

GOODELL-PRATT COMPANY

55 Wells Street

Greenfield, Mass., U. S. A.

GOODELL-PRATT

ELECTRIC DRILLS

FRAZIER Self-Balanced DISAPPEARING STAIRS

Adds Extra Selling Value!

Builders, architects, home-owners, dealers—all heartily endorse this modern, self-balanced disappearing stairs.

The FRAZIER is absolutely in a class by itself—the most popular product of its kind yet introduced. Slides up and down on rollers, overhanging weight of stair balances and closes door. Thirty minutes after you get it—it's ready to lend EXTRA SELLING VALUE to that house!

\$35

F. O. B. Pittsburgh, Pa.
(Shipping weight 125 lbs.)

FULLY GUARANTEED

Attractive proposition for specialty men—wife

FRAZIER STAIR COMPANY, 2615 West Liberty Ave., Pittsburgh, Pa.

Gentlemen: I am an Architect , Builder , Dealer . Please send details on Frazier Stairs.

Name

Address



No
Weights,
Springs,
Pulleys.

Completely
assembled,
including jamb
and door

*CELLized Oak Floor Blocks

laid directly over a wood subfloor or concrete in EVERBOND, a plastic cement, without nails. A quiet permanent design oak floor, beautiful, cleanly, economical.

*CELLized, —a chemical treat, to protect against the action of moisture. Improves the finish. Resistant to insect attacks, and decay.

Guaranteed by *CELLized Oak Flooring Inc., when laid by approved flooring contractors. Names on request. Sold through lumber dealers.

*CELLized Oak Flooring Inc.
Memphis, Tennessee



Write for this free book

HIGGINS'



A Complete Line of Blacks and Colors

BLACKS

GENERAL—(Soluble) for fine line work and washes.

WATERPROOF—for working drawings and all others which must withstand rough handling.

COLORS—*Brilliant and Waterproof*
Far superior to water colors because of their exquisite beauty and brilliancy.

CARMINE GREEN INDIGO VIOLET
BRICK RED BLUE BROWN YELLOW
ORANGE VERMILION SCARLET

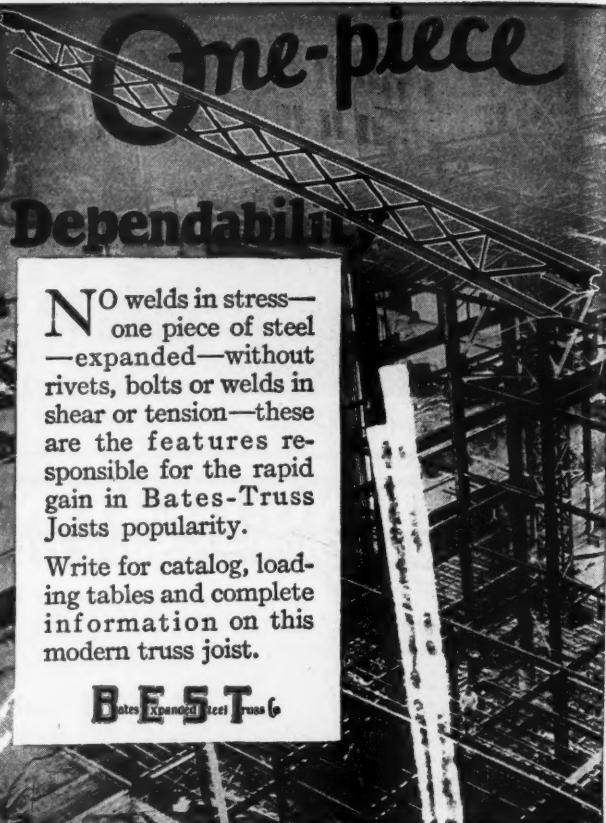
WHITE—Waterproof—Opaque
—For correcting blueprints, for rendering the colored inks lighter and opaque.

HIGGINS' DRAWING BOARD AND LIBRARY PASTE
Especially prepared for pasting drawing paper tight and flat to the drawing board. Spreads easily. Never lumps.

A request on your letterhead will bring you a copy of "Techniques," a profusely illustrated 20-page book giving new and interesting uses for Higgins' American Drawing Inks.

Chas. M. Higgins & Co., 271 Ninth St., Brooklyn, N. Y.

Drawing Inks



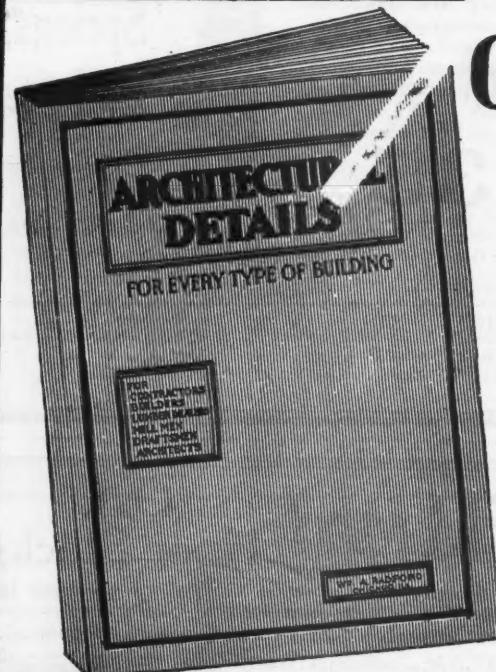
NO welds in stress—
one piece of steel
—expanded—without
rivets, bolts or welds in
shear or tension—these
are the features re-
sponsible for the rapid
gain in Bates-Truss
Joists popularity.

Write for catalog, load-
ing tables and complete
information on this
modern truss joist.

BEST
Bates EXPANDED STEEL TRUSS JOISTS

BATES-TRUSS JOISTS

Sales, Engineering and Executive Offices EAST CHICAGO, INDIANA



Get this big book FREE

With Your New or Renewal Subscription
To AMERICAN BUILDER

"ARCHITECTURAL DETAILS" is a complete manual of building practice, as applied to carpentry, construction and the use of millwork. It is a remarkable collection of full-page plates, accurately drawn and reproduced to exact scale, showing clearly every detail of modern building construction and finish. These plates make plain the framing and construction of residences of every type. This volume, 9 x 12 inches in size, has 160 pages of illustrations. All dimensions, angles, measurements and joints are made so plain and are so well illustrated that the man on the job will have no difficulty or trouble doing the work.

Clip and Mail This Coupon, NOW!

Clip

THE AMERICAN BUILDER

1827 Prairie Ave., Chicago, Ill.

1927

Enclosed find \$2.00 for which Enter
Renew my subscription to
The American Builder for one year and send me free and
postpaid, a copy of your book "Architectural Details."

AB-12-28

NAME _____

STREET OR
BOX No.
P. O.

STATE _____

My occupation is (Check Only One)

Dealer Builder Architect Real Estate Miscellaneous

HOW TO GET YOUR FREE COPY

Send in your new or renewal subscription for
one year at the regular rate of \$2.00 and we
will send you "ARCHITECTURAL DETAILS"
absolutely FREE, postpaid.

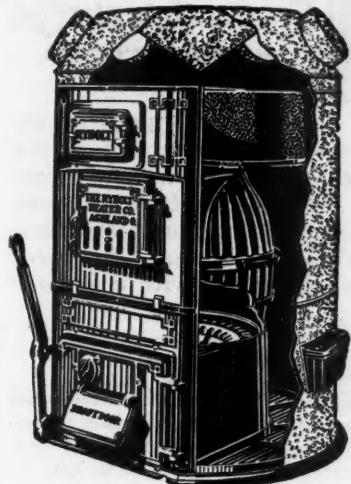
Offer good in U. S. and Canada.
Add \$2.00 to Foreign Countries.

Clip

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Rybolt Furnaces

—MEASURE UP—



To Your
Standard of
Profit

To Our
Standard of
Dimensions

To the Owner's
Standard of
Satisfaction

Write for catalogue and dealer's prices

THE RYBOLT HEATER CO.
ASHLAND :: OHIO

EDWARDS



Spanish **TILE** METAL ROOFING

Here is the Roof for All Time—Time, fire, storm, wind, rain, lightning—these mean nothing to the imperishable "Edwards" Spanish Tile Metal Roofing.

Here is beauty, too; the touch of color and all the charm of the Old Spanish Terra Cotta.

The initial cost is no more than that of any ordinary roof.

Read all about this Roof in the most elaborate and comprehensive Metal Spanish Tile and Shingle Book on the market—IT'S YOURS FOR THE ASKING.

THE EDWARDS MFG. CO.

401-417 Eggleston Ave., Cincinnati, Ohio
The World's Largest Makers of Metal Ceilings, Metal
Shingles, Metal Roofing, Siding,
Rolling Doors, etc.

Write for
beautifully
illustrated
catalog.
It Explains

MASTER WOODWORKER

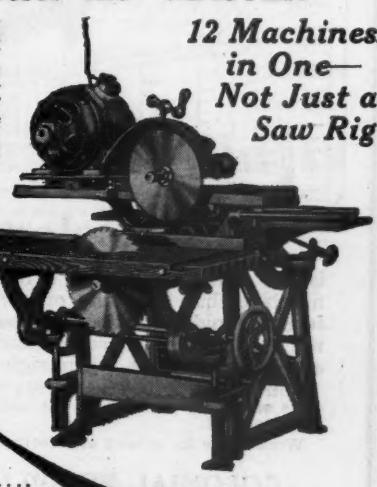
Speed Up Your Work
Make More Profit

Don't stick to slow, tiresome handsaw methods. Build quicker, easier, and cut down labor cost by using a "Master." Do every woodworking operation with it. Beat competitors' prices.

Builders Prefer the "MASTER"

because it is more dependable, speedier, safer and more accurate. Quickly moved; requires little floor space; easily operated. Electric motor or gasoline-engine drive. 4 models. Sold on EASY TERMS. Pays for itself on the first job.

10,000 in Use



Mail
Coupon

"Master
Woodworker"
Congress & Brush Sts.
Detroit, Mich.
Please send me FREE
booklet describing the
"Master Woodworker." Also
your easy-payment plan.

Name.....

Address.....

"NATIONAL" Men Make Big Money

Get into the
Floor Surfacing
Business

With a "National"



You get a better machine that's easier to handle and does more work. Pays for itself out of its earnings.

We'll furnish you with the full equipment to get started as a NATIONAL MAN. We'll show you how to line up business, and make from \$25 to \$50 a day. We'll be behind you with advertising matter, business stationery, movie slides, etc. Why don't you do what others are doing?

Mail coupon today for free booklet "What Jim Daley Did"

NATIONAL SANDING MACHINE CO., 4567 Diversey Avenue, Chicago, Ill.

Mail This Coupon Today

NAME

ADDRESS

CITY

STATE



Don't Trust
the
Wide World
with Your
Tools and
Equipment

Brand them with
an Everhot.
Wear them out
yourself.

The
Everhot
Branding
Outfit
Definitely
Identifies

your scaffolding, tools and equipment as your own, and effectually keeps your working equipment *always* on the job.

Saves its small cost many times over every year.
Write for complete information.



How a Spare Time Hobby Became a Big Business



Send for Catalog

Henry J. Ryle, of East Macon, Ga., writes, "I want to tell you how we grew from a backyard shop to a plant that occupies half a city block. Father and I bought a few of your molds just to experiment with and because we thought it would be fun to make porch and garden furniture in our spare time. We started in and soon found we couldn't make them fast enough. This mold business turned out so well we are now devoting our full time to it and are today quite proud of our well equipped plant and the business we are doing."

This is one instance. We can tell you about hundreds of successes like Ryle's. Send for Utility book. It tells how one man cleared \$2,165 on an investment of \$100.00, and how another man made \$562 from one mold, etc., etc. Write today for this book and see for yourself.

CONCRETE
EQUIPMENT COMPANY
500 Ottawa Ave.
HOLLAND, MICH.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



A REVOLUTIONARY development in water softener design...totally different and demonstrably better. Double circulation in both softening and regenerative action permits a greater capacity with smaller tanks, requires less salt, delivers softer water with a greater flow rate.

Startling New Efficiency

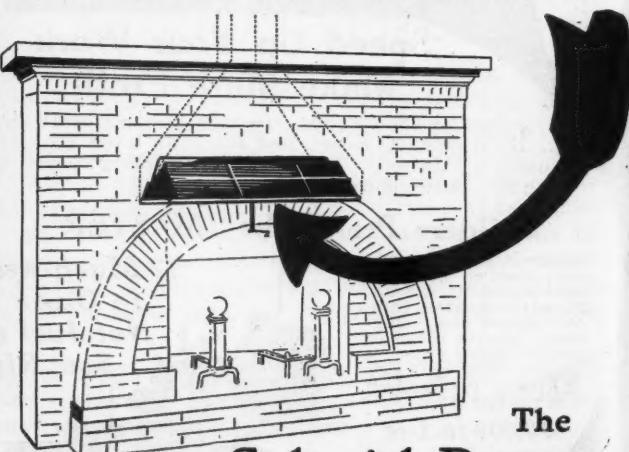
Nothing like it ever before. Regenerative action accomplishes positive agitation of mineral when regenerating, prevents packing or channeling and thoroughly cleans the mineral at each regeneration.

Write for Bulletin and Prices!

FORT WAYNE ENGINEERING & MFG. COMPANY

1713 North Harrison Street
Export Office, 25 Warren St., New York
FORT WAYNE, INDIANA

Perfect Draft Control FOR GENUINE FIREPLACES



The Colonial Damper

is the American builder's first thought to insure a fireplace that functions properly. Controls draft perfectly, avoids smoking, insures correct formation of the fireplace throat, saves time and money, and guarantees satisfaction when rightly installed.

With Style "G" operating device the damper may be set two, three or more courses above the opening where only best results are obtainable.

Write today for catalog and descriptive details.

COLONIAL FIREPLACE COMPANY
4604 Roosevelt Road CHICAGO, ILLINOIS

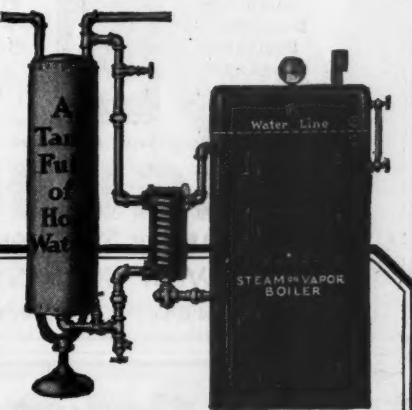
HOT WATER from a FUEL-LESS heater

Owners of homes (apartments and hotels too) save all the care and most of the cost of heating water for domestic uses!

Employ an Excelso Indirect Water Heater. Burns no fuel itself. Instead it uses the hot water of the heating boiler. This, circulating around the copper coil inside an Excelso, keeps the range boiler full of clean and pure hot water for half or less the usual cost.

Excelso Products Corporation
DIVISION OF AMERICAN RADIATOR COMPANY
79 Clyde Ave., Buffalo, N. Y.

Ask your plumbing or heating contractor or write.



Approved by Good Housekeeping Institute; endorsed by the leading Boiler and Radiator Makers; Fully Guaranteed.

EXCELSO WATER HEATERS

SIZES FOR ONE FAMILY OR ONE HUNDRED FAMILIES

Write for YOUR CATALOG TODAY

Get the Facts and See the Pictures of the

New Miami Cabinets

AMERICA'S greatest line of medicine cabinets, for dealers, owners, architects, and contractors and builders of apartment houses, homes, office buildings or public institutions. Our engineers will help solve your cabinet problems. Write today for the catalog!

THE MIAMI CABINET CO., Middletown, Ohio

THE MIAMI CABINET CO., Middletown, Ohio

Date.....

Gentlemen: Please send me, without obligation, copy of your new 1928 catalog.

Name.....

Address.....

City.....

Owner Architect Contractor Dealer

24 HOUR Service

Allmetal WEATHERSTRIP

Builders—Contractors

Make your own weatherstrip installations, and save about 50% of the cost of nearly every job.

Thousands of contractors have built up a highly profitable side line business by doing their own weatherstripping and calking.



The ALLMETAL Weatherstrip line is complete. We offer a wide variety of designs and sizes to meet every requirement. Our complete stock and shipping facilities insure twenty-four service on all orders.

WE LOAN WEATHERSTRIP TOOLS

ALLMETAL WEATHERSTRIP CO.,
231 West Illinois St., Chicago, Illinois.

Gentlemen: Without obligation, please send me samples and literature.

Name.....

Address.....

City..... State.....

If you want to know

— the amount of labor required for the various operations of a building construction job.

— the prices of labor and materials as a check on your estimates.

— the cost of replacing various types of existing buildings.

See this book

Barnes' ESTIMATING BUILDING COSTS and APPRaising BUILDINGS

A THOROUGH, up-to-date cost handbook for the building contractor, estimator and appraiser. The book covers all types of building. The data in the book are arranged for quick, easy reference. Wherever possible they are presented in the form of tables.

From excavation and foundation work right through to the wiring and painting of the finished buildings, the book gives exactly the information needed to insure safety in the estimate from every point of view. It tells you how to calculate the cost of materials, of labor, of haulage, of overhead, of equipment, and so on. It gives valuable information on installations and material strengths.



By
Frank E. Barnes
Supervising
Bldg. Valuation
Engineer
N. Y. C. Lines

515 pages
4 1/2 x 7, flexible,
\$5 net
postpaid

McGRAW-
HILL BOOK
COMPANY, Inc.,
370 Seventh Ave.
New York City

You may send me for
10 days' free examination
Barnes' Estimating Building
Costs and Appraising Buildings,
\$5 net, postpaid.

I agree to remit for the book or
to return it, postpaid, within 10 days
of receipt.

Name.....

Address.....

Position.....

Company.....

A.B. 12-1-23

See your copy free—
MAIL THIS
COUPON!

PULLMANIZE YOUR WINDOWS!

What Two Architects Have to Say—

"I have several plans on the board in which I purpose using your method and intend to eliminate sash weights entirely in the future."

"I am accustomed to specifying your Sash Balance, freely and its performance has been uniformly satisfactory."

(Names furnished on request.)

PULLMAN MFG. CO., INC. — 47 FORD STREET — ROCHESTER, N. Y., U. S. A.

Wind, Sleet, Snow, Winter—Profits



The harder the winter the bigger the profits will be for Federal Metal Weather Strip Agents. You can be one of those to add surprising profits to your income this winter selling and installing Federal Metal Weather Strips. In use on homes, schools, office buildings, churches, etc., etc.

Write today for interesting proposition.

Federal Metal Weather Strip Co.
4538-58 Fullerton Ave. — Chicago, Ill.

Boice Bargains Can't Be Beat!

No matter what you're looking for in a bench machine, you'll find Boice has it and at a better price!

For instance This

4' Handi Jointer

20" long, cuts $\frac{1}{4}$ " deep, has large rabbet arm cast as part of front table. Fence tilts 45 degrees both ways. And the price, complete with guard, is only

\$28.00

With $\frac{1}{4}$ h. p.
motor and
base, add
\$35.00.

\$300

This Universal Handi Saw
has a 15" x 17" table which elevates for grooving—tilts 45 degrees for beveling. Swings 9" saw and cuts 2 $\frac{1}{2}$ " stock. Attachments for jointing, disc and drum sanding, boring, dadoing. Price is only \$30.00.
Send for our 152-page Catalog of 80 pages describing complete Boice-Crane lines.
W. B. & J. E. Boice, Dept. A.B. 12-D, Toledo, Ohio

A MATTER OF DOLLARS AND CENTS

Most of the value you build into a house is out of sight. But oak floors aren't. A home-buyer recognizes them instantly and judges the quality of the building accordingly. You can sell an oak-floored house *more quickly*, and realize an added profit many times greater than the trifling cost of building with oak instead of a cheaper flooring. Get the figures on oak flooring from your lumber dealer. Or write us direct for information. OAK FLOORING BUREAU, 1238 Builders' Building, Chicago, a bureau maintained by the oak flooring industry for the benefit of home-owners and builders.

Oak flooring advertising will be carried on during 1928-29 on an increased scale. Look for the advertisements in "House & Garden", "House Beautiful", "Good House-keeping", "Better Homes and Gardens" and "Literary Digest".

Theatrical Lighting

Footlights
Borderlights
Spotlights
Floodlights
Cove Lights



Floor Pockets
Wall Pockets
Plugging Boxes
Aisle Lights
Exit Signs

for Descriptive Literature write

KLIEGL BROS
UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.

321 WEST 50TH STREET
NEW YORK, N. Y.

REDYBORD

An indispensable convenience for Homes, Apartments and Hotels. You do not have to plan a space for the ironing board. Redybord can be installed in a few minutes on the back of any closet or bathroom door or on the springs of a disappearing bed. The money-saving and space-saving of Redybord make it a most popular seller for both old and new buildings.

DISTRIBUTORS

Get into this profitable business. We will gladly send you information on our proposition and territory open.

REDYBORD, INC.
General Offices and Display Rooms
Builders' Exposition—228 N. LaSalle St.
CHICAGO, ILLINOIS.

FOR casement security, convenience, ease of operation, safety, and protection, use Win-Dor Casement Operators on your jobs.

Win-Dor
CASEMENT HARDWARE

The Casement Hardware Co.

402-A North Wood Street, Chicago

CASEMENT HARDWARE HEADQUARTERS

SIGN OF STABILITY
MESKER

STANDARD BOWSTRING STEEL ROOF TRUSSES
BETTER TRUSSES FOR LESS MONEY

WRITE FOR CATALOG
GEO. L. MESKER & CO. EVANSVILLE, IND.

DISAPPEARS INTO THE CEILING WHEN NOT IN USE

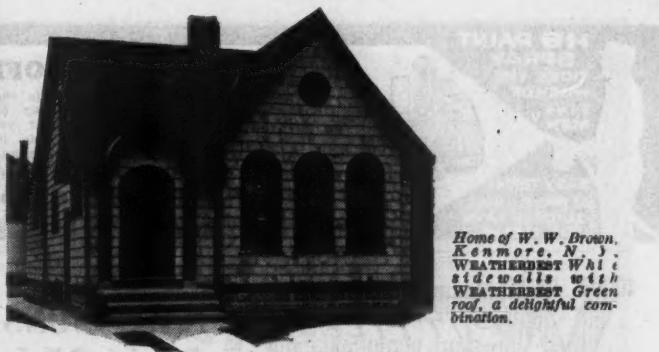
NOW You Can Easily Afford That Extra Room

In the attic is the space for the extra rooms you so much need. A Bessler will make them most accessible at very low cost. It is a strong, roomy, good looking stairway. Guaranteed to give satisfaction or money refunded.

Write for illustrated circular of practical suggestions.

The Bessler Disappearing Stairway Co.
Akron, Ohio

BESSLER
DISAPPEARING
STAIRWAYS



Home of W. W. Brown, Kenmore, N. Y.
WEATHERBEST White cedar walls with WEATHERBEST Green roof, a delightful combination.

Delightful Small Homes

LET us send you WEATHERBEST Portfolio of photogravures in full colors showing many types of small homes that are inexpensive to build and as attractive as the large homes also shown in the portfolio.

WEATHERBEST Stained Shingles are 100% edge grain, red cedar, preserved by the WEATHERBEST process of staining by hand, backed by a sixteen-year policy: "Not to cheapen materials or process, to meet price competition". WEATHERBEST STAINED SHINGLE Co., Inc., 145 Main St., North Tonawanda, N. Y. Western Plant—St. Paul, Minn. Distributing Warehouses in Leading Centers.

Weatherbest
STAINED-SHINGLES
FOR ROOFS AND SIDE-WALLS

WEATHERBEST STAINED SHINGLE Co., Inc.
145 Main St., North Tonawanda, N. Y.

Enclosed is 10c (stamps or coin) for postage and handling. Please send WEATHERBEST Color Chart, Portfolio of Photogravures showing WEATHERBEST Homes in full color, some with floor plans. □ Also enclose book on Modernizing and Reshingling old homes.

Name

Address



4
Days' Work
Done in
8
Hours

A Money-Maker for Contractors

The new type interior wall finishes and shaded trim can be done more beautifully and expertly with the Binks Spray Gun. And in one-fourth the time it takes to finish by hand.

BINKS
PORTABLE
SPRAY-PAINTING
MACHINE

All interior and exterior surfaces, no matter how coarse, are covered easily and mechanically perfect. With a Binks Portable Spray Painting Unit you can deliver a building completely finished in less time and at a greater profit. Simple to use even for a beginner. The best paying investment you can possibly make. It will pay you to send in for interesting details. Write today.

Binks Spray Equipment Co.
Dept. M., 3121 Carroll Ave., Chicago, Illinois
Representation in principal cities

Multiplying the Hours



Routing Stair Stringers
Vertical Head

Multiply the normal working hours by the facilities of the 20th Century Woodworker—and the result will surprise you. All over the country, in large places and small, this finely-built, accurate and versatile machine is multiplying productive hours into larger and unusual profits.

"Getting more production" dominates the thoughts of workers in wood—and the 20th Century Woodworker dominates the possibilities for getting it. We'll gladly prove it—to your satisfaction.

20th Century Wood Worker

Can be equipped with 1 H. P. to 5 H. P., A. C. or D. C. electric motors, or 1½ H. P. air-cooled gas motor. Information on motors cheerfully furnished. This is the best combination woodworker that can be driven by either electricity or gasoline.

Excellent territory
still available
for agents.

Twentieth Century Sales Agency, 1321 Arch St., Philadelphia, Pa.
Please send me, without obligation, details concerning owner-
ship and operation of the 20th Century Woodworker.

Mr. _____

Mr. _____

Mr. _____

Mr. _____

Mr. _____



HB PAINT SPRAY
DOES THE WORK OF FIVE MEN
EASY TERMS,
30 DAYS TRIAL
QUICKLY PAYS FOR ITSELF.

ADD \$150 to \$300 PROFIT MONTHLY from PAINT SPRAY

ONLY \$16 monthly for descriptive booklet V128—tell us what kind of work you want to do with a spray outfit—we'll send you complete details.

HOBART BROTHERS COMPANY, Box V128, TROY, OHIO

Vento EUTYLESS Steel Basement Windows

should be used by every Builder in houses he builds



U.S. Patent
3,424,24. Fats. pend.
ing. Infringements will
be prosecuted.

Don't build without "VENTO." There is a dealer who carries "VENTO" near you; see him, examine this steel basement window. If your dealer does not carry "VENTO" write us today.

VENTO STEEL SASH CO.

Muskegon, Mich.

MAIL-O-BOX

PAT. U.S. AND CANADA

WRITE US FOR PARTICULARS

Here's a great built-in feature that fills a real need. Can be sold on every new home or remodeling job. Styles for every type of home. Adjustable to any wall thickness. Easily and quickly installed. Retails \$4.75 to \$12.00. We will gladly supply you complete information.

Write for circular and our proposition.

Penn-Greg Mfg. Co.
809 University Ave. St. Paul, Minn.



Ask For and Screen

2 Ways to Identify PEARL WIRE CLOTH

Due to its metallic coating, a secret process exclusive with G. & B. PEARL is an exceptional rust resister. Because of its long life, smooth finish and even mesh PEARL is and has been for over 30 years the most satisfactory screen wire cloth.

Our round red tag and new copper wires in the selavage identify PEARL.

Address Dept. "A"

The Gilbert & Bennett Mfg. Co.
New York Georgetown, Conn. Chicago Kansas City
PEARL is made in Regular Grade (12x12 mesh) and 14, 16, 18, 20, 24 and 30 mesh; also Extra Heavy Grade (14 mesh only). The best hardware dealer in your city sells "PEARL."



"Factory to You" Lighting Fixtures

READY to HANG

Save You $\frac{1}{3}$ to $\frac{1}{2}$

Write for Catalog

BARS LIGHTING FIXTURE MFG. CO.
4204 Hastings St. DETROIT, MICH.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Beautiful Brick Effects

deserve

**Anchor Brand
Mortar Colors**



C. K. Williams & Co.

634 North 13th St.
EASTON, PA.



Dealers, Builders,
Homeowners write
for full information.

Fireplace Charm Leads to Sales

Leading builders everywhere now recognize that the charm and beauty of a Readybuilt fireplace is the deciding factor in many a home sale. It promises cheer, comfort and homelike beauty.

Many designs, color and sizes to match any interior. Installed in one hour by handy man. Shipped complete anywhere. Readybuilt has Imitators—no Equals.

THE READYBUILT PRODUCTS CO.
2484 Frederick Ave. Baltimore, Md.



Feed Chutes for Easier Loading —Faster Discharge—More Thorough Mixing



The Smith Mixer (8½-S):
Simple and trouble-free in
design and construction.
The blades cut through the
batch and it is not merely
stirred as in other small
mixers.

Smith Mixers have the features that give more batches a day—plus the dependability that can be built in only from 28 years' experience. All models are fully described in Catalog 525.

THE T. L. SMITH COMPANY
1026 32nd Street Milwaukee, Wis.
Sales Offices and Service Stations in all principal cities

SMITH MIXERS

Clinton Mortar Colors

Clinton Cement Colors

NATURE'S MINERAL PIGMENTS

Guaranteed Uniform and Colorfast

CLINTON METALLIC PAINT CO.

5128 Clinton Road CLINTON, N. Y.

THE WRIGHT RUBBER TILE

The Money Making Possibilities

WRIGHT RUBBER TILE In Your Town

Directions For Laying

FREE This 24 Page BOOK

Write for your copy today—Sent free prepaid without obligation.

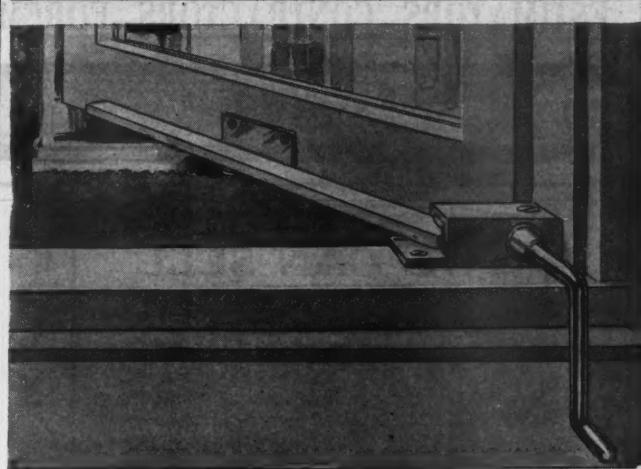
WRIGHT RUBBER PRODUCTS CO., A. B. 12, RACINE, WIS.

Want to Get Into Business for Yourself?

Learn how contractors, builders and floor layers are developing a fine business in selling and laying

WRIGHT Rubber Tile and Stair Treads

This new 24 page book shows how easy it is to sell and lay this long wearing, beautiful floor material.



for the Narrowest Stools

No. 94 Casement Operator mounts on stools as narrow as 1 1/4 inches. Without disturbing fly screens, opens or closes outswinging casements in 3 1/2 turns. Self locking at any position. Well made and dependable like all Rixson products. Write for circular.

THE OSCAR C. RIXSON COMPANY, 4450 Carroll Avenue, Chicago, Illinois
New York Office: 101 Park Avenue, New York City, N. Y.

RIXSON Builders' Hardware

Overhead Door Checks
Floor Checks, Single Acting
Floor Checks, Double Acting
Olive Knuckle Hinges
Friction Hinges

Casement Operators & Hinges
Concealed Transom Operators
Adjustable Ball Hinges
Butts, Pivots and Bolts
Door Stays and Holders

YEAR 'ROUND PROFITS

for Carpenters, Contractors and Building Specialties Men

A wonderful opportunity for exclusive selling agents on a practical building product which insures a 50% profit.

Men needed in all parts of the country to start immediately in their own home towns. Successful candidates will be industrious, hard working, financially responsible men who are able to finance their own accounts and look after collections. From \$800 to \$1000.00 cash will be necessary, the amount depending on volume of business handled. This is a live, legitimate, permanent business with unlimited possibilities. You will deal with architects, builders and home owners only.

Mail coupon today for complete details regarding this remarkable proposition and opportunity to get into a profitable year 'round business of your own.

G. E. SELLSTROM, Pres.

GIBBS BOARD TILE CORPORATION
346 N. OGDEN AVE., CHICAGO, ILL.

G. E. SELLSTROM
346 N. Ogden Ave., Chicago, Ill.
Please send full details regarding your exclusive selling agents' proposition.

Name.....
Address.....
City and State.....

"portability PLUS"

That's what Builders call it



THE BEAVER

BACK IT UP to the lumber pile and do your work five times faster. The BEAVER with either electric motor or gasoline engine mounted on trailer can be taken anywhere and is ready for immediate use. No need to lift or take apart. It is the latest development in portable woodworkers.

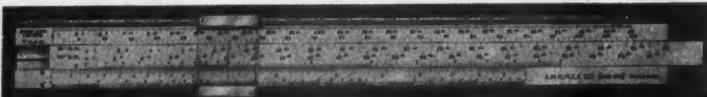
No other machine offers you these advantages.

SEND THIS COUPON FOR DESCRIPTION AND TRIAL OFFER
Hutchinson Manufacturing Co., Norristown, Pa.
Without obligation, I would like to have details regarding the BEAVER with trailer. Also time payment plan and free trial offer.

Name.....
Address.....

A.B.-12

ESTIMATORS—CONTRACTORS—FOREMEN Figure Plans in Two Minutes. Save Time—Money



The most wonderful device ever invented for estimating. Makes hard calculations easy. Eliminates guess-work and errors. Takes off quantities of lumber from building plans rapidly. Enables Superintendents and Building Foremen to order lumber quickly and accurately. Finds areas of given surface immediately. Not the same as a regular sliding rule.

Write today for Free Circular and Prices.
S. M. B. RULE COMPANY, 7531 S. State St., CHICAGO, ILL.

P
Y
R
A
M
I
D

YOU CAN SELL PYRAMID METAL WEATHERSTRIPS

MAKE money selling and installing Pyramid Metal Weatherstrips. Our new cooperative selling plan gets you started and keeps you going. Write for details about the Pyramid proposition. You'll see why Pyramid representatives are enthusiastic. No obligation.

PYRAMID METALS CO.
2014 WABANIA AVENUE, CHICAGO

P
Y
R
A
M
I
D

Best
Tilter
Buy!



All-Steel and Low Priced!

Here is the handiest, little trailer tilter on the market. You can't beat it on small concrete jobs.

It has an all-steel construction, ample power, large capacity, rubber tired disc wheels.

Let us send you our tilter catalog. Write today. Dept. 3.

LEACH COMPANY
Oshkosh, Wis.

LEACH MIXERS

U.S.
STANDARD
BUILDING
MATERIALS

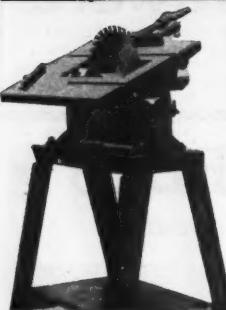
THE pioneer fireproof plaster wallboard, with the exclusive, patented Sheetrock Reinforced Joint System, that seals and conceals all joints. Takes any decoration. Sold by good yards everywhere. Made only by

United States Gypsum Company
300 W. Adams St. Chicago

Reg. U. S. Pat. Off.

SHEETROCK

FIREPROOF...INSULATING



New—Modern—Better

The table tilts and raises at both ends. An exclusive Kennedy feature. You can pay more, but you cannot buy a better or more efficient rig. With this rig and attachments you can rip, cross cut, sand, grind, plane, groove, tongue, plough, miter, bevel, bore, rabbet, mortise, joint, make mouldings, etc.

Don't fail to get our prices and free literature before you buy. Write today.

RALPH KENNEDY
111 No. 7th St. Philadelphia, Pa.



The assurance
of better plastering

TIGER FINISH

"Spreads like
warm butter"

THE KELLEY ISLAND LIME & TRANSPORT CO.
CLEVELAND, "World's Largest Producer of Lime" OHIO



Waterston's Aluminum Vise

The handiest and most practical vise made for the Carpenter. Weight only 2 lbs. Easily attached to end of Bench or Horse by tightening thumb screw. Holds boards, windows or doors plumb or horizontal. Both Screws work in Steel Bushings, making a strong, serviceable vise.

J. M. WATERSTON — 424 Woodward Ave., Detroit, Mich.
Send for our No. 25 Catalog showing a complete line
of Carpenter's Tools.

AMERICAN BUILDER
The Open Door to a Great Market
COVERS THE ENTIRE BUILDING INDUSTRY

Electric Captain Winch—
for all purposes.



WINCHES

Manufacturers of winches for all purposes. Power, Electric and Hand Winches. For Motor Trucks, Tractors and general purposes. Also Lifting Jacks, and Rollers for Lumber Trucks.

Write for Bulletins and prices. State for what purpose winch is to be used, and weight of load to be lifted.

Manufactured by

Stimmel Winch & Machine Works
Works and Offices: 562-66 W. 22nd St.



New York City

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

TRADE **CHICAGO** MARK

SPRING HINGES *The "Relax"*



Relax
Type 6001
Spring Pivot-Hinge

Contractors and Architects will find "Relax" Spring Pivot Hinges very desirable for Hospitals, Churches, Schools and Residences, because of their many important features and proven quality.

The spring action release and the noiseless operation of the hinge are important advantages in any of the various types of buildings referred to.

Send for Descriptive Literature

Chicago Spring Hinge Company

CHICAGO

U. S. A. NEW YORK

370 Rafters . . .

506 Studdings . . .
all the Roofing . . .

Ball Bearing



Tilting Table
14" x 17"

Safety-Saw

For Ripping, Cross-cutting, Mitering, Dadoing, Grooving, Ploughing, Beveling, Jointing, Boring, Tenoning, Sanding, Grinding, etc.

This machine will save many hours of hand labor and will handle all your material up to 2½" in thickness. Runs from light socket.

Do not confuse the Safety-Saw with the cheap toys on the market. This rig is built to last for years and stand up under heavy work.

SEND THIS COUPON TODAY FOR DETAILS

SAFE TOOL MFG. CO., Bridgeport, Pa.

Please send your free folder describing the Safety-Saw, also full details regarding free trial and money-back offer.

NAME.....

ADDRESS.....

\$48.50

Including $\frac{1}{2}$ h.p., 110-v., 60-cycle A. C. Motor, Belt, Pulley, Guard, 8" Combination Saw, 2 Guides.

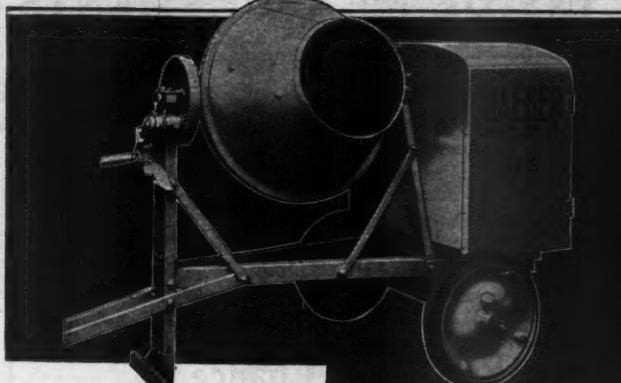
\$35.00 Without Motor

\$6.700 With $\frac{1}{2}$ h.p. Motor

FREE TRIAL

Our Money-Back Guarantee protects you from risking a single cent.

ONLY \$179 NET F.O.B. COLUMBUS

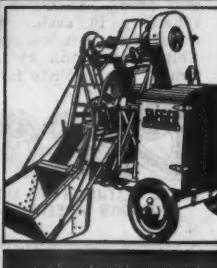


COMPLETE with engine and 100% Jaeger quality throughout. Only Jaeger world leadership makes possible values like this. Write for catalog, prices and terms.

THE JAEGER MACHINE CO.
521 Dublin Ave. Columbus, Ohio

For Biggest
Values—

On Tilters and
Non-Tilt Mixers,
all sizes, let us send
Jaeger's New
Catalog.



DON'T GUESS

PLAY
SAFE
WITH

Miles
CONCRETE
EQUIPMENT

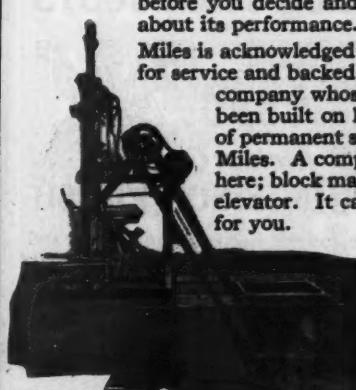
Because

Miles, for over thirty years, has served the concrete industry, with distinction.

Let Miles Equip Your Plant

The Miles line is complete. See a Miles plant in operation before you decide and ask the user to tell you about its performance.

Miles is acknowledged quality equipment, built for service and backed by the written word of a company whose long service record has been built on honor. You are assured of permanent satisfaction when you buy Miles. A complete Miles unit is shown here; block machine, power tamper and elevator. It cannot fail to make money for you.



Write today. Our Catalog and Information will be mailed you free of charge.

The MILES MFG. CO.
Dept. 10
JACKSON, MICH.

SLIDE —

*This Rule for
INSIDE MEASUREMENTS*



Cut out "guesswork"—use the MASTER SLIDE RULE and always be accurate—exact—safe! This scientific measuring device is the last word in rules. No rule supersedes the MASTER SLIDE RULE for accuracy and simplicity.

For taking inside measurements order a MASTER SLIDE RULE from your dealer, or if he does not carry them, write directly to us.

MASTER RULE CO., 815 East 136th St., New York City

Big Profit Chance to Weatherstrip and Screen Men

This is an opportunity seldom offered in the weatherstrip business. All the benefits of the national advertised weatherstrip, yet you own your own business and set your own prices! Several cities still open. Exclusive franchise to one man of experience and reliability in each. Franchise covers both weatherstrips and metal frame window screens. Quality the best that can be made. Shipments within 24 hours. A reliable square dealing company behind you. Write for full details, samples and prices.



METAL WEATHERSTRIPS AND
WINDOW SCREENS

Ceco Weatherstrip & Screen Co.

1926 So. 52nd Ave.
CHICAGO, ILL.

Blackboards for all requirements

Duroplate, Permaroc, Endurarc, Natural Slate
Tackboard, Corkboards and Bulletin Boards

Highest quality guaranteed. Let our service department
help you with your problems. It costs you nothing.

*Samples sent free on request. We can
save you money; write today for prices.*

E. W. A. ROWLES CO.

2348 So. La Salle Street : : Chicago, Illinois

CUT DOWN YOUR TRIM COSTS

With TRIMPAK three carpenters can completely trim a 6-Room house in one day. TRIMPAK, the interior trim for doors and windows, comes packed in 2 cartons—one for the horizontal members and one for the verticals. All ready to fit. Made in every wood. Write for further information.



TRIMPAK CORPORATION
44 Whitehall St. New York City

The MORTON

"Venetian"

All-Mirror Door Steel Bathroom Cabinet

Makes bathrooms more beautiful. Artistically etched mirror completely conceals steel, white enameled cabinet. Recesses 5 in.; four deep shelves; made in four sizes; shipped complete, ready for instant installation; reasonably priced. Write for Catalog M-3, showing the "Venetian" (Model F) and ten additional models, including installation details.

MORTON MANUFACTURING COMPANY
5102 WEST LAKE STREET—CHICAGO, ILL., U.S.A.



OLD EUROPEAN SLATE ROOFS

Exactly duplicate
the old slate roofs
of Europe with
their rich colorings
and strong natural
texture.



*Roof Suggestions
on Request.*

KNICKERBOCKER SLATE CORP.

E. J. Johnson, President

355 West 26th St.

New York

THE SHEBEL FILER



PRICE \$5.00

The Shebel Filer was designed for the mechanic to enable him to file his saws scientifically and perfectly. It is a simple tool, easy to adjust and easy to use. Used in connection with our filing tables it produces a faster, smoother and easier cutting saw than can be obtained in any other way. Immediate results are assured. This tool is as necessary as a saw set. A saw can be set with a nail, but only a mousback would do this. Free hand filing is becoming just as much out of date. Modern tools for the modern man. That's getting there. You should know all about this tool.

*Write for full particulars or send in your order at once to,
ANTHONY P. SHEBEL, 326 REED ST.
Milwaukee, Wis.*

The Shebel Filer is used in every State of the Union and every Province of Canada

Just Completed and the Outstanding Success of the City

The Belvedere Hotel

48th Street, West of Broadway, New York City—Times Square's Finest Hotel

Within convenient walking distance to important business centers and theaters. Ideal transit facilities; 450 rooms, 450 baths. Every room an outside room—with two large windows. Large single rooms, size 11' 6" by 20' with bath, \$4.00 per day. For two, \$5.00—twin beds, \$6.00. Large double rooms, twin beds, bath, \$6.00 per day. Special weekly rates. Furnished or unfurnished suites with serving pantries, \$95 to \$150 per month. Moderately priced restaurant featuring a peerless cuisine.

*Illustrated Booklet free on request.
CURTIS A. HALE, Managing Director*

**MITERED CASINGS
ARE THE BEST CASINGS****CLAMP
NAILS**

MAKE THEM SO
EASY
The Best, Fastest
and most
Economical
METHOD
EASY
Write us for information
and samples.

\$15.00

This is all the extra equipment that is required for making
the finest mitered casings.

CLAMP NAIL CO. 4540 Palmer St.,
Cragin Station, CHICAGO, ILL.

**NOW
FASTER—CLEANER—BETTER
FLOOR SURFACING
WITH THE NEW IMPROVED
FREE-O-DUST SUPER SURFACER**

All dust eliminated with the new improved
dust collector—different in design—positive
in action.

No more waves or chatter marks. Absolute
vibrationless surfacing now made possible
with our exclusive sanding drum construction.
The new ERMCO V-BELT drive is silent
and smooth, requires no attention—no gears,
sprockets or chain to wear and give trouble.
Alemite force feed lubrication to all moving
parts insures long life.

Write today for facts on the
NEW IMPROVED—FREE-O-DUST
Sold on terms—Shipped on trial

ELECTRIC ROTARY MACHINE COMPANY
3824 W. Lake St. Chicago, Ill.

**CLAMP
NAILS**

MAKE THEM SO
EASY
The Best, Fastest
and most
Economical
METHOD
EASY
Write us for information
and samples.

\$15.00

This is all the extra equipment that is required for making
the finest mitered casings.

CLAMP NAIL CO. 4540 Palmer St.,
Cragin Station, CHICAGO, ILL.

**Hopson
Metal Ceilings
and Sides**

Tasty, dignified designs, characterize Hopson Metal Ceilings
and Sides. They're all easy to match and install. Our
pictorial catalogue will show what we have to offer in
original designs. Get a copy today.

W. C. HOPSON CO.
704 Ellsworth Ave. Grand Rapids, Mich.

**AJAX** folding metal
**SHEATHING
AND ROOFING
BRACKETS**

When winter comes you can
not work safely on roofs
without them. The quick-
est ever—safe as the earth
under your feet.

Send for descriptive literature

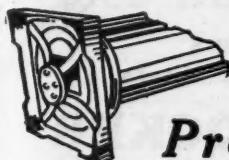
Ajax Building Bracket Co.
1155 Rydal-Mount Rd., Cleveland Heights, Ohio

ELECTRIC WIRING DEVICES

Tumbler and Push-Button Switches for
houses, offices and apartments. Every
latest style and improvement: reliable
quality in any price-class. Also Con-
venience Outlets, Warning Lights, the
new Art Plates and all needed Wiring
Devices. Write for Catalogue "T"—to
see what your new jobs should have.



THE HART & HEGEMAN MFG. CO.
HARTFORD, CONN. MAKERS OF ELECTRIC SWITCHES SINCE 1890

**ZIMMERMAN**
(Patent Iron Base)**Prevents rotting
of wood columns**

Made for
Round and
Square
Columns

The Zimmerman is the only base having
center bearings. Lifts the column from $1\frac{1}{2}$ to 6
inches off the floor, allowing the air to circulate
between the column and the floor. Water runs
off without wetting the bottom of column.
Specify this base by name.

S. CHENEY & SON, Manlius, N. Y.

**Expansive Screw Anchors**

Stud Expansion Bolt Showing primary
expansive sleeve only.

Ackerman-Johnson Co.

625 W. Jackson Blvd., Chicago : 53 Park Place, New York

WONDER TILTING
MIXERS
Marsh-Capron
Drum Type Mixers
cmc Hoists

Construction Machinery Co.
Waterloo, Iowa

Plants at Waterloo and Chicago Heights, Ill.



Matot

Full Diameter Lift Wheel—Hobbed Gear Automatic Brake

DUMB WAITER

Matot machines are roller-bearing throughout, and guaranteed for five years.

PROMPT SHIPMENTS
Catalog on Request

D. A. MATOT CO., 1545 Montana St., Chicago
Manufacturers of Hand Power Dumb Waiters and Elevators

IRON FENCE FOR EVERY PURPOSE

Plain and ornamental iron fence, entrance gates, wire and iron window guards, balcony railings, folding gates, gratings, cellar doors, etc.

Catalog on request—estimates cheerfully given—orders filled promptly.



cash, f. o. b. factory complete with 60 cycle electric motor

NOW!! only

Biggest capacity for price \$70



CINCINNATI IRON FENCE CO., Inc., 3331 Spring Grove Ave.
CINCINNATI, OHIO.

TRY THIS "STERLING" CONVERTIBLE LEVEL AT OUR EXPENSE!

For ten days it's yours... to test... examine... and use... with no obligation or cost at all. Pin this ad to your letterhead and we'll send you the complete information in folder FL-212. Sterling instruments are accurate and dependable.

WARREN-KNIGHT CO.
136 N. 12th St. Phila., Pa.
Maker of "Sterling" Transits and Levels



Patented
Model No. 40
Easy Terms
No Deposit Required

New FREE CATALOG!

Send for it to-day!

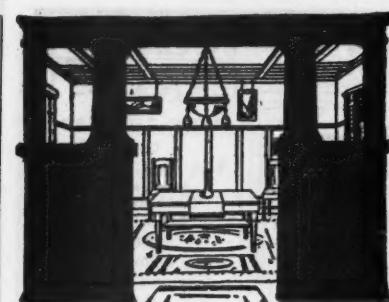


HOME OWNERS! BUILDERS!
Send for Our BIG New **FREE Catalog**

Containing hundreds of fixtures for every purpose and every taste. Our selection is the finest and most complete. Be sure you get our catalog before buying. Our prices save you money and our **MONEY BACK GUARANTEE** gives you 30 DAYS TRIAL.

Also describes fixtures for Churches, Theatres, Auditoriums and Public Buildings. Contractors, Builders, Electricians are invited to write for our proposition.

PARAMOUNT ELECTRIC CO.
530 Z ARCH ST., PHILA., PA.



BUILT-IN WOODWORK

Adds the touch of Refinement. Beauty that increases renting and selling values.

SEE OUR OFFERS

Send for Free Catalog

STEPHEN BILEK CO.
2119 South Troy Street : CHICAGO



NOW!! only

Biggest capacity for price \$70



Due to quantity production, world wide distribution, long experience in water plant building and F-M manufacturing efficiency, this modern 210-gallon-per-hour home water system can be offered at the lowest price ever placed on a unit of this capacity. Enclosed and fully protected. Automatic. Built with F-M dependability—and unmistakably the greatest water system value ever offered! There's a size and type F-M water system for every purse and purpose. Write for new catalog—just published.

FAIRBANKS, MORSE & CO.
Manufacturers Chicago, U. S. A. Dept. H-12

FAIRBANKS-MORSE HOME WATER SYSTEMS

Saw Rigs
Concrete Mixers
Mortar and Plaster Mixers

KNICKERBOCKER
BUILT TO LAST AND LAST

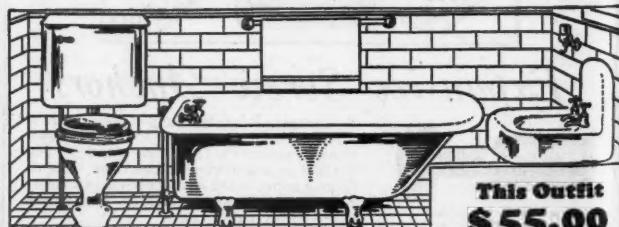
Write for special circular on the machine that interests you.

The Knickerbocker Co.
Jackson, Michigan

Bath Room Outfits

Send for Dealers' Catalog

FINEST FIXTURES MADE .. PRICES ALWAYS LOWEST



This Outfit \$55.00

Finest complete line of PLUMBING AND HEATING SUPPLIES AND FIXTURES in the country. Immense supply. Immediate delivery. You can always save money at KAROL'S and get best quality of goods. Our big catalog tells the story. It will enable you to figure cheaper on jobs.

B. KAROL & SONS CO. CHICAGO
889-90 So. Kedzie Ave.

STOP!

Get on the right road to real money! Sell Diamond Weatherstrips and make up to 50% and more profit!

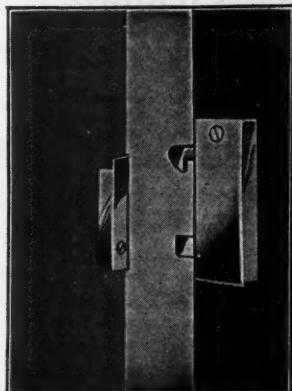


Every home and building owner in your vicinity is a perfect prospect for Diamond Weatherstrips because they're highest in quality. You invest nothing till you get the contract.

Don't Delay—Write Today!

THE DIAMOND METAL WEATHER STRIP CO.

Columbus, Ohio



Patent Applied For

HAGSTROM SECRET DOOR LATCH

Designed especially for concealed panels. May also be used on doors, instead of ordinary latch. When door is closed no hardware is visible. To close push lightly on door—to open push hard. Door moves less than $\frac{1}{8}$ ". Shrinking or swelling will not affect this latch as long as door swings free.

Latch may be screwed right on door jamb. Strike screwed on door without cutting. Built in five sizes. Anyone can apply this latch in less than ten minutes. If your jobber cannot supply you address Dept. A for literature and prices.

Hagstrom Mfg. Co., Glen Cove, N. Y.

Kees Building Corners

... save time and money cutting and fitting corner joints.

... are tighter, more weatherproof and give neater finish.

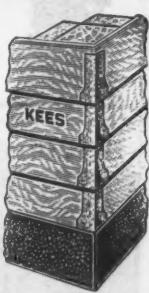
... take paint without weathering, being chemically treated.

... give butt-mitted corner effect and can't spread open.

... in sizes for siding 3" to 12" wide, any thickness.

STOCKED BY MOST HARDWARE DEALERS
Write for free samples and prices.

F. D. KEEPS MFG. CO.
Box 93 Beatrice, Nebraska



METAFORM

The Best Investment A Contractor Can Make

The Metaform system of shifting molds ahead, allows continuous pouring of concrete with a surprisingly small amount of equipment. A Metaform outfit will more than save its cost in one season. The savings after that are sheer net profit for year after year.

Tell us what classes of concrete work you do and we will send you complete Metaform information.

METAL FORMS CORPORATION
Milwaukee, Wisconsin

METAL FORM OUTFITS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

BOSS MIXERS ARE THE BOSS OF THE FIELD
GET NEW LOW PRICES!

Boss 3 1/2 S Tilter

Just right size. Makes small jobs pay bigger profits. Goes anywhere a truck can go. Built of steel. Write for amazingly low prices and learn about the big saving.

Boss 10S One-Two Bagger

Extremely compact. Weighs no more than some one baggers. BOSS Patented High Speed Remixing Action and Rapid Discharge give 25 to 30 more batches daily.

WRITE! Get BOSS prices and compare with others. Catalog illustrates complete line of Drum Mixers, Tilters, Pavers and Hoists. Ok'd by 17,500 users.

American Cement Machine Co.
224 S. Fourth St., Keokuk, Iowa



BOSS Mixers are built in all sizes and types—BOSS Hoists single and double drum.

—For permanence specify the famous

Hodell Sash Chain



Hodell No. 75 Apartment Sash Chain offers the most modest home or apartment building as you now pay for the advantages of noiseless, permanent, smooth-running sash chain at no greater cost than for cord. Formed from a cold-drawn ribbon of polished steel, NOT STAMPED FROM SHEET; every link is uniform. See Sweet's. Ask for A. I. A. Specification File, Class 27-A1, and No. 75 folder.

We have some open territory on an exclusive basis for reliable resident agents handling general builders specialties. Address

THE CHAIN PRODUCTS CO.
Established 1896
CLEVELAND, OHIO

Why Pay \$6 for a \$1 Job?

The Champion Mortiser will cut as many mortises for \$1's worth of labor as you now pay \$6 for if you're still using brace and chisel methods. In other words, the Champion Mortiser cuts mortising costs five-sixths—saves 42¢ on every mortise if your labor costs \$1.00 an hour.

Many have made Champion pay for itself in two days. Every mortise is perfect in length, width and depth, smooth sides and ends. No chance to spoil material regardless how knotty, hard or soft. Carried anywhere. Try the Champion on our 15-day trial offer. Money back if not satisfied. Year's guarantee. Send for literature now!

Colgan Machinery & Supply Co.
412 Hayden Bldg. Columbus, Ohio

The CHAMPION MORTISER



Something Finer!

A Hidden Medicine Cabinet
—A Fine Venetian Mirror

Here you have the elegance of a decorative mirror. The medicine cabinet is hidden. No hinges visible. The back of the mirror is of steel finished in hand-rubbed walnut. The cabinet is of electrically welded steel, white enameled. Every builder should have the complete Bulletin of our comprehensive De Luxe line on hand. Write for it today.

Majestic Steel Cabinet Co.
Household Steel Cabinet Headquarters
4211 Belle Plaine Ave. Chicago





55 Designs in Wood

Mantel-Pieces

Classical and Period designs in finishes to harmonize with any scheme of interior decoration.

Write for literature and descriptive folder showing mantel-pieces that will meet the requirements of any room in the home.

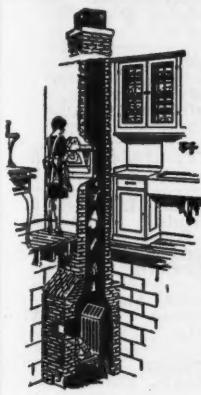
THE BRECHER COMPANY
443 W. Jefferson St.
Louisville, Ky.

QUICK ACTING *The Taylor* SELF LOCKING

CLAMPS

An Investment Not An Expense
Quickest and strongest clamps made. Standard in U. S. Government Works and in such concerns as General Electric Co., Singer Sewing Machine Co., Victor Talking Machine Co., etc. We can prove it in your own shop. Write today.

JAMES L. TAYLOR MFG. CO., 110 Parker Avenue Poughkeepsie, N. Y.



THE ECONOMY INCINERATOR

REMENDOUSLY popular with builders and owners because of its low first cost, absolute absence of operating expense, complete safety from soot, flames or smoke. Complete combustion is secured by strong draft and correct design. Model shown is for new homes. Also made for homes already built. Write for complete details.

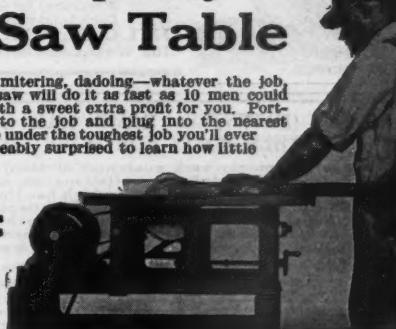
ECONOMY INCINERATOR CO., INC.
287 Farwell Ave., MILWAUKEE, WIS.
Dealers: Write for our proposition.

The Work Moves Fast with this Speedy H & A Saw Table

IPPING, cross-cutting, mitering, dadoing—whatever the job, this keen, sturdy little saw will do it as fast as 10 men could do it by hand—better—with a sweet extra profit for you. Portable; electric; take it right to the job and plug into the nearest lamp socket. Will stand up under the toughest job you'll ever have for it. You'll be agreeably surprised to learn how little it costs.

Write for Catalog of
Band Saws Scroll Saws
Rip Saws Cut-Off Saws
Shapers Wood Lathes
Jointers Glue Pots

HESTON & ANDERSON
212 Western Avenue
FAIRFIELD, IOWA



Save

LABOR—MATERIAL—TIME—TROUBLE
with the New Barnes

Sash Holder

no weights—no cords—no pulleys—no ruffles

made of Brass—Quickly and easily adjusted without removing sash. When combined and installed with our new modern metal weatherstrip produces at much less cost practically a

FRAMELESS WINDOW and allows for 3" mullion and 2" trim or less. Sample pair Sash Holders \$1.25.

BARNES SASH HOLDER INC., 1505 N. Ills., Indianapolis, Ind.

GARCY
BRAND

Pilaster Standards
and Adjustable
BRACKETS

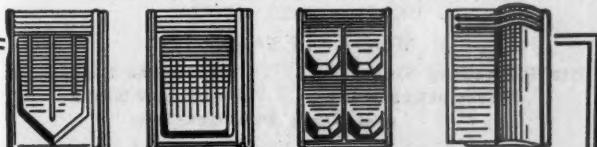
Easiest, quickest, most economical to install for supporting

ADJUSTABLE SHELVING

in China closets—Butler pantries and Linen closets. Also Library shelving—Fruit shelving and other built-in shelves. Perforated standards allow for $\frac{1}{2}$ inch adjustment and perfect alignment of shelving.

WRITE FOR FREE SAMPLES

GARDEN CITY PLATING & MFG. CO.
1430 So. Talman Ave. Chicago, Ill.



MAKE A BIGGER PROFIT On The Roof

Wise, thrifty builders will appreciate the saving in putting on Walters and Coopers Metal Shingles. The Walters and Coopers Metal Shingles weigh less than wood, or slate and take lighter frame work to support it. Moreover, it is permanent. This roofing does not require skilled labor to put it on, carries a low rate of insurance and is storm, wind and fireproof. We manufacture a complete line of designs in Painted Tin, Galvanized Tight Coat, Sheet Zinc and Copper.

Write for full size samples and prices

National Sheet Metal Roofing Co.
339-345 Grand St., Jersey City, N. J.

Free for
10 Days

Fully
Equipped

Level and
Transit
Combined

Ask
Your
Dealer
or Mail
Coupon

Greatest
Instrument Value

C & B
Convertible Y Level

Model 45 for

Universal
Service

Write
today

Order a
G & B
Level
Please mail me free information
Name
Address

Dec. 28





Before You Buy See the NEW

Speedmatic

Combines the best features into one machine. Lightest speed saves paper, sands more floor. Patented construction insures fine finish. Easy on the operator.

See our Advertisement on Page 158

PORTER-CABLE MACHINE CO., 1721 North Salina St., Syracuse, N. Y.

Stop "Guesstimating"—avoid Errors and Omissions

Our BUILDERS' ESTIMATE SHEETS



will SAVE Time and MONEY—
100 leaves in a book, 4x9 1/2 inches. { 1 Book, \$1.00
via Int. Parcel Post same day we get order { 3 Books, \$2.50
5 Books, \$4.00

LOUIS FINK & SONS CO., Printers

Time Sheets, Job Tickets, Letter Heads, etc.
In Business Thirty Years
Noted for Quick Service

Elm Ave., Laurel Springs, N. J.

Household
and Commercial
Sizes

\$120.00 to
\$194.00



BIG PROFITS

Selling HILD Electric Floor Machines

The simplest, most practical electrically operated floor machine for home, office, store, church, school, hospital, showroom, garage, factory, etc. Finishes old or new floors; waxes, scrubs, polishes.

Write today for complete information.
Don't be the man who waited too long.

HILD FLOOR MACHINE CO.
108 West Lake Street, CHICAGO, ILL.

BANKS (PATENTED) REMOVABLE STEEL CLOTHES POSTS FOR WASH DAY

They carry a money back guarantee of satisfaction. To guard against inferior imitations be sure to look for the "Ace of Clubs Top" which has the name and date of (Patent). None original without same. The "Ace of Clubs Top," that holds the clothes line, from now on will be Parkerized, making them absolutely Rust-Proof. No advanced price for same.

If dealer or Jobber can't supply, write for descriptive folder.

BANKS STEEL POST COMPANY
128 Wakeman Ave., Newark, New Jersey



KLEENBURN CINCERATOR

"It Is The Most Practical Outfit of Its Kind We Have Ever Used."

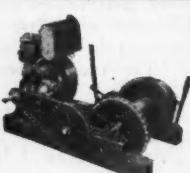
From one who builds 50 homes a year.

Preferred by Architects over built-in brick type because costs less and allows location of chimney anywhere.

Costs owner less than \$100.00 Installed. Uses little gas. Write for Discounts.

THE KLEENBURN COMPANY, 216 W. Water St., Milwaukee, Wis.

5 Bu. Cap. Gas-Fired.



PROFITS With IDEAL HOISTS

Save money wherever there is a rope or cable to pull. Made in two sizes, 1,200 to 2,000 lbs. capacity. Reversible and non-reversible—single and double drum, with or without engine. Write today for complete information.

UNIVERSAL HOIST & MFG. CO.
196 East 14th St. Cedar Falls, Iowa

BE INDEPENDENT

Start a Business of Your Own

Atlas Weatherstrips are in Great Demand

Every home, apartment house, school, office building, etc., is a prospect for Atlas Metal Weatherstrips. Just a little effort on your part will assure you a handsome income. Write us today for agency proposition.

ATLAS WEATHERSTRIP CO.
3943 W. 16th St. Chicago, Ill.



LIGHTING FIXTURES

READY TO HANG

Direct from the manufacturer. Completely wired, including glassware. Send for new catalog No. 29. Just reduced prices.

Special Proposition to Dealers

ERIE FIXTURE SUPPLY COMPANY, Inc.
Station B Erie, Pa.

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Classified Advertising

RATES:

Small letters 25c per word.

Capital letters 50c per word.

Minimum twenty words.

Business Opportunities

For Sale and Exchange

Help and Situations Wanted

To Insure Insertion Remittance Must Accompany Order

PATENT PROCURED. Prompt service. PERSONAL, CAREFUL AND EFFICIENT SERVICE. Highest references. Moderate fee. Send sketch and model for actual search and advice. GEORGE P. KIMMEL, Master of Patent Law, 94-L, Legal Bldg., Washington, D. C.

CARPENTERS' AMAZING POCKET RAFTER BOOK.—13 rises, 81 house widths, thousands of lengths, common rafters, hips, valleys and jacks. \$1.00. T. W. MARTIN, 714 E. 4th St., Charlotte, N. C.

ATTENTION—Home Mechanics. We sell unusual cabinet hardware, chest trimmings, tea wagon wheels and casters, big line small hinges, locks, etc. Upholstering supplies, electrical hardware, knocked down cedar chests, etc. Send ten cents stamps for catalog. THURSTON MANUAL TRAINING SUPPLY COMPANY, Jobbers and Manufacturers, Anoka, Minnesota.

CONCRETE BUILDING BLOCK MACHINES AND MOLDS. Steel molds for burial vaults. Catalog free. CONCRETE MACHINERY CO., 5 Main St., St. Louis, Mo.

RIGGING Job or other Construction work. Energetic young man now employed on private yacht wants employment with building or construction company, preferably in rigging department. Address "K. R." Box 822, City Hall Station, New York City, N. Y.

USED TRANSITS and LEVELS. BUFF, Hudson Terminal Building, New York City.

CARPENTERS, CONTRACTORS, BUILDERS, ETC.—Send for our Free Booklet, "How to Read Blue Prints." Tells how to make most money in the building trades. Every builder should have this information. Write today. Address: Dept. 2346, CHICAGO TECH., 118 East 26th St., Chicago, Ill.

SALES MEN, LOCAL FRANCHISE AGENTS, big money, selling, applying Mastic Roofing. Easily applied. MALLEABLE ASPHALT Co., 6358 Broadway, Chicago, Ill.

PATENTS—Booklet free. Highest references. Best results. Promptness assured. WATSON E. COLEMAN, Patent Lawyer, 724 Ninth St., Washington, D. C.

REPAIRING TRANSITS & LEVELS



NOW is the time to have your instruments repaired. Fully equipped repair plant at both Chicago and New York. All work guaranteed.

Ask for list of used transits and levels. Large stock of all makes at low prices.

CHARLES BRUNING CO., INC.
445 Plymouth Court, Chicago
102 Reade Street, New York

THE SLATINGTON-BANGOR SLATE SYNDICATE, Inc.

SLATINGTON, PENNA.

Miners and Shippers of

Black Roofing Slate

Natural Blackboard

Structural Slate

Electrical Slate

and Slate Products

WRITE US FOR PRICES



Build Your
Own Jointer
Frame

Buy your Jointer head or saw mandrel from us. Build your own frame and you can make a big saving. Our machines are guaranteed to give perfect satisfaction.

WHISLER MFG. CO. - - - Ottumwa, Iowa

Folding Stairs \$35.00

adds a
STORY
to your
HOME

Make better
use of your attic

THE MARSCHKE CO.,
551 University Ave. St. Paul, Minn.

SEDGWICK
DUMB WAITERS
and ELEVATORS
for All Purposes

Homes containing a Sedgwick Fuel Lift are more livable and more easily sold. Sedgwick Hand Power Outfits also include Trunk Lifts, Invalid Elevators, Ash Hoists, Gravity Drops, etc.

Standard Sizes Ready to Ship
Write for New Catalog

SEDGWICK MACHINE WORKS
154 West 15th Street NEW YORK
"Sedgwick Service Satisfies"

FORSTNER BITS
BRACE & MACHINE

THE FINEST Tool Manufactured for important wood work.

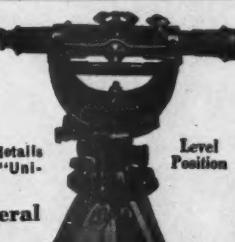
Specially adapted for Hardwood operations; indispensable to the High Class Carpenter and for Cabinet and Pattern Works.

Manufactured by
THE PROGRESSIVE MFG. CO.
TORRINGTON, CONN.

Special Offer

A sample bit up to 1 inch in diameter will be mailed postage prepaid, upon receipt of 75c to any woodworker or carpenter.

Post Yourself on the "Universal" LEVEL TRANSIT



Level Position

A mere request brings you interesting details regarding the New, Different and Better "Universal" Level-Transit.

Especially Adapted for General Contractors

Its unusual simplicity makes it easy for inexperienced operator to get accurate results in good time. Can learn it in five minutes. Very substantially made; no horizontal turning of telescope. Lifting from support or adjustment of screws or bands necessary.

DAVID WHITE CO., INC.

Home Office and Works—315-319 Court St., MILWAUKEE, WISCONSIN
Manufacturers of White's Improved Surveying and Drawing Instruments, Branch Office, 400 S. Hoyne Ave., at West Van Buren St., Chicago.

NEW
BISMARCK
HOTEL-CHICAGO
RANDOLPH AT LA SALLE

The hotel with a history, where good food is a tradition—where superior service is a creed—and where the cheerful comfort of the guest is an accepted obligation.

Famous for a third of a century. Quiet outside rooms, restful beds. 85% of all rooms, \$2.50 to \$3.00.

THE SUPERIOR SPEEDSTER

*Will Eliminate Hand Sawing On Your Job
A Money Maker for YOU*



Because it is built with swinging arbor and tilting table it is the ideal machine for the builder. The SPEEDSTER may be powered with gasoline engine or electric motor and so can be used anywhere.

This machine is as easily moved as a wheelbarrow and so can always be moved to the work rather than bringing the work to it.

New bulletins describing the SPEEDSTER are ready—send for one.

Jones Superior Machine Co. 1260 W. North Ave. CHICAGO, ILL.

INTERNATIONAL CASEMENTS

OTSWOLD CASEMENTS of solid rolled steel with muntins for sheet glass or prepared to receive leaded glass. Standard sizes and designs. Write for catalog containing full details and photographs.

INTERNATIONAL CASEMENT CO. INC.
500 BROAD AVENUE, NEW YORK, NEW YORK

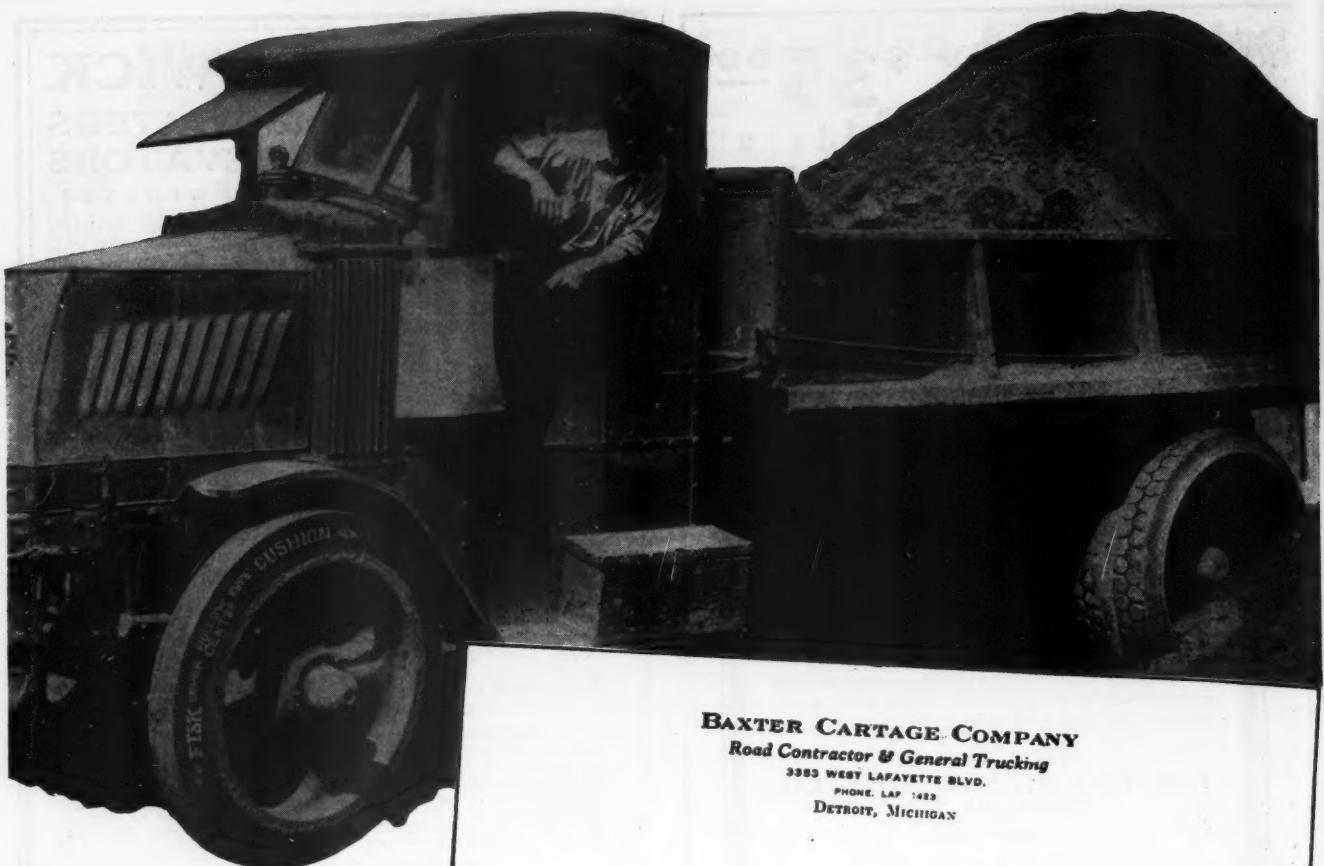


ANDREWS HEATING CO.
1500 Heating Bldg.
MINNEAPOLIS, MINN.

Ask for Agency Offer and Catalog

All Kinds of Heating—Hot Water—Steam—Hot Air—Pipeless—Pipe—Sewage Disposal—Water Supply—Plumbing—Low Prices.

ANDREWS HEATING COMPANY
Please send Catalog and Agents Offer
Name _____
Address _____
Town _____
State _____



BAXTER CARTAGE COMPANY
 Road Contractor & General Trucking
 3383 WEST LAFAYETTE BLVD.
 PHONE, LAP 1422
 DETROIT, MICHIGAN

August 4, 1928.

The Fisk Tire Co. Inc.,
 356 E. Jefferson Ave.,
 Detroit, Mich.

Attention: Mr. H. C. Davidson.

Dear Sir:

Regarding your 36 x 7 Fisk Super-cushion Plain Tread Tires which we are using on the front wheels of two of our dump trucks, the first cost of the Super-cushion Tires we considered high when purchasing. We have found the greater cushioning of these tires has more than repaid the difference in the price of your Super-cushion and ordinary tires.

Your 40 x 8 Fisk Non-skid Dual Tires we are using on our rear wheels have proven their merit in cushioning a heavy load.

The large deep-cut button tread is a real help in the mud.

We wish to take this opportunity to compliment The L. F. Joliat Co., your local distributor, for the prompt and efficient service they have rendered us.

Yours very truly,

Baxter Cartage Co.
J. Griffon

FISK

THE FISK TIRE COMPANY, INC., CHICOPEE FALLS, MASS.



TIRES

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

HOLDS DOORS RIGID—OPEN OR SHUT Stops Danger of Monoxide Poisoning

Contractors win the everlasting gratitude of home builders when they install this ingenious garage door control. Sta-Put is amazingly humanlike. By a slight pull on one door both doors open automatically. Both doors shut the same way. Sta-Put holds doors open or shut in highest wind. Prevents swinging or slamming. Eliminates propping doors to hold them open. Prevents damage to car or garage. Eliminates necessity for overhead and roll-away types of doors. Fits ordinary garage door.

Mail Coupon for Special Offer to Builders and Dealers — Investigate Sta-Put at once. See how it increases salability of homes and adds to their value many times Sta-Put's cost. Mail coupon for offer.

DOOR OPERATORS CORP., 1217-1219 W. Monroe St., Chicago, Illinois

Costs
Less Than
*1000

Sta-Put Door Control prevents danger of monoxide poisoning through doors blowing shut while engine is running. Dr. A. H. Kegel, Chicago's Health Commissioner, says: "Deaths from carbon monoxide have averaged one a week. The blue smoke from motor vehicle engines in closed garages takes a steady toll of lives and garage doors should always be open while motor is running." Many of these deaths are due to the doors accidentally blowing shut. Sta-Put positively ends this danger. Sta-Put comes completely assembled ready for installation and takes about 20 minutes to attach. Weight 21 lbs.

Investigate Sta-Put at once. See how it increases salability of homes and adds to their value many times Sta-Put's cost. Mail coupon for offer.

7 OUTSTANDING FEATURES

1. Slight pull of one hand operates both doors automatically.
2. Holds doors open or shut in any wind.
3. Does away with necessity for overhead and roll-away types of door.
4. Eliminates danger of monoxide poisoning.
5. Comes completely assembled.
6. Installed in 20 minutes.
7. Pays for itself many times over in saving to car doors, time, temper and inconvenience.

DOOR OPERATORS CORP. Dept. G-12
1217-1219 W. Monroe St., Chicago, Ill.

Gentlemen: Please send me your special offer on Sta-Put Garage Door Control.

Name.....

Address.....

City..... State.....

I am a Contractor Dealer Homeowner Check which.

ADVERTISERS' INDEX



December, 1928

Page	Page
Ackerman-Johnson Co.	171
Adam Electric Co., Frank.	152
Adamston Flat Glass Co.	150
Ajax Building Bracket Co.	171
Allmetal Weatherstrip Co.	163
Alpha Portland Cement Co.	160
American Cement Machine Co.	173
American Chime Clock Co.	174
American Face Brick Assn.	58
American Floor Surfacing Machine Co.	129
American Saw Mill Machinery Co.	25
American Steel & Wire Co.	137
American Stove Co.	50
Andersen Lumber Co.	107
Andrews Heating Co.	177
Anti-Hydro Waterproofing Co.	144
Asbestos Shingle, Slate & Sheathing Co.	34
Associated Tile Mfrs.	38
Atlas Weatherstrip Co.	178
Babs Lighting Fixture Co.	166
Banks Steel Post Co.	176
Barnes Sash Holder Co.	175
Bates Expanded Steel Truss Co.	160
Bates Valve Bag Corp.	28
Bayley Company, Wm.	154
Beckman-Dawson Roofing Co.	183
Behr-Manning Corp.	157
Bessler Disappearing Stairway Co.	165
Bilek Co., Stephen.	172
Binks Spray Equipment Co.	165
Bismarck Hotel.	177
Black & Decker Mfg. Co.	48
Boice, W. B. & J. E.	164
Bommer Spring Hinge Co.	128
Bostwick Steel Lath Co.	57
Boyle & Co., Inc., John.	148
Bradley-Miller & Co.	126
Brecher Company.	175
Brunning Co., Charles.	176
Brunswick-Balke-Collender Co.	33
Buff & Buff.	176
Burnham Boiler Corp.	145
Burroughs Adding Machine Co.	60
Cabot, Inc., Samuel.	124
Carborundum Co., The.	153
Car-Kra Corp.	19
Carter Co., R. L.	157
Casement Hardware Co.	164
Ceco Weatherstrip Co.	170
Ceilized Oak Flooring, Inc.	150
Chain Belt Co.	2
Chain Products Co.	173
Chappell & Co., Waywell.	150
Chase Brass & Copper Co., Inc.	47
Cheney & Son, S.	171
Chicago Spring Hinge Co.	169
Chicago Technical College.	127-176
Cincinnati Iron Fence Co.	172
Clamp Nail Co.	171
Clarke Sanding Machine Co.	17
Clay Products Assn.	132
Clinton Metallic Paint Co.	166
Coleman, Watson E.	176
Colgan Machinery & Supply Co.	173
Colonial Fireplace Co.	162
Columbus Union Oil Cloth Co.	139
Concealed Bed Corp.	138
Concrete Equipment Co.	162
Concrete Machinery Co.	176
Consolidated Concrete Machinery Corp.	136
Construction Machinery Co.	171
Coppes Bros. & Zook.	146
Crane Co.	26
Crescent Machine Co., The.	150
Cromar Co., The.	24

ADVERTISERS' INDEX CONTINUED TO PAGE 181

METAL LATH HEADQUARTERS

NORTH WESTERN EXPANDED METAL CO.

For Nearly A Half Century

—the North Western Expanded Metal Company has been making Metal Lath for the builders of America.

During these 44 years its products have been subjected to the severest tests of time, usage and climatic conditions. And seldom, indeed, have they failed to fully measure up to the most exacting standards.

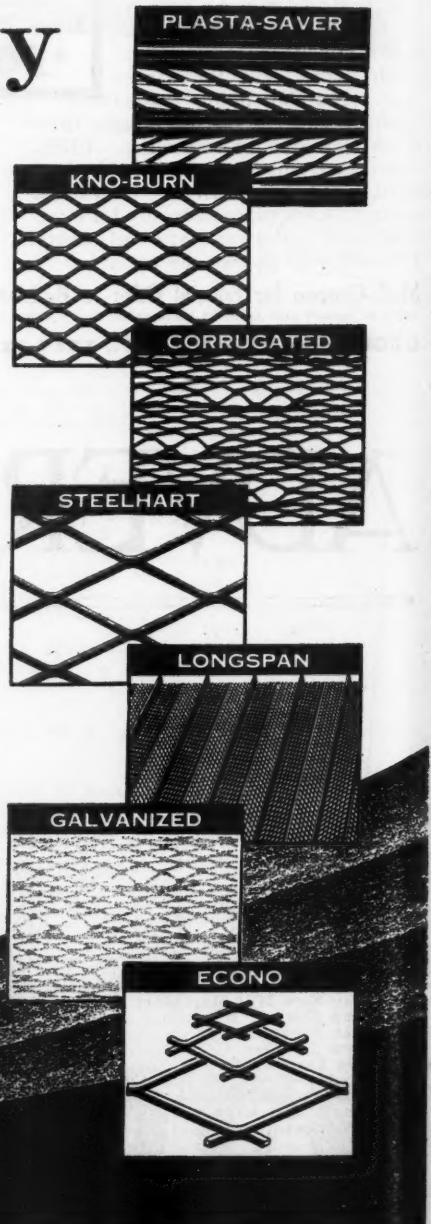
As a result, the North Western label has come to be a symbol of *quality*. Each addition to its already large line of metal lath, expanded metal reinforcing and plastering accessories, is specified and bought with complete confidence. For experience has shown that in point of efficiency, economy of labor and material, it is usually the outstanding product in its class.

We Gladly Send Samples or Catalogs

NORTH WESTERN EXPANDED METAL CO.

1294 Old Colony Building

CHICAGO



ADVERTISERS' INDEX

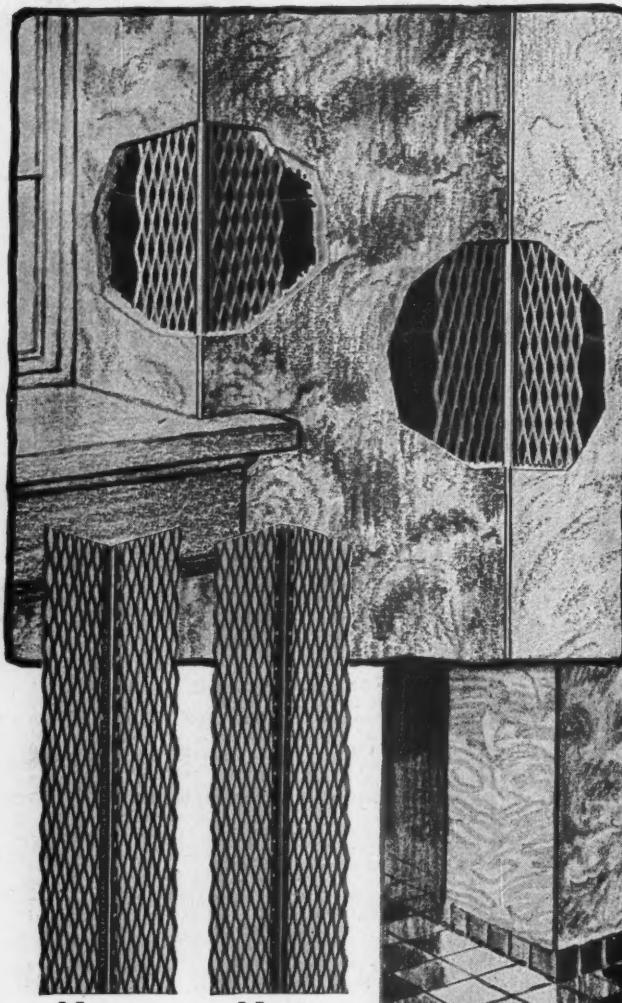
December, 1928 (Continued)

Page	Page	Page	
Detroit Steel Products Co.	62	Kees Mfg. Co., F. D.	173
DeWalt Products Co.	149	Kelley Island Lime & Transport Co.	168
Diamond Metal Weatherstrip Co.	173	Kennedy, Ralph	168
Disston & Sons, Inc., Henry.	119	Kerner Incinerator Co.	132
Donley Brothers Co., The.	151	Keuffel & Esser Co.	140
Door Operators Corp.	170	Kimball Brothers Co.	135
Dunn Mfg. Co., W. E.	49	Kimmel, George P.	176
Duro Co., The.	181	Kleenburn Company, The.	176
Economy Incinerator Co.	175	Kilegel Brothers	164
Edwards Mfg. Co., The.	161	Knape & Vogt Mfg. Co.	174
Electric Rotary Machine Co.	171	Knickerbocker Co.	172
Erie Fixture Supply Co.	176	Knickerbocker Slate Co.	170
Everhot Mfg. Co.	162	Koehring Co.	146
Excelso Products Corp.	163	Kuhla, H. B. Fred.	133
Fairbanks, Morse & Co.	172	Kwik-Mix Concrete Mixer Co.	144
Farrand, Hiram A.	156	Lamella Roof Syndicate, Inc.	146
Federal Metal Weatherstrip Co.	164	Leach Company	168
Federal Motor Truck Co.	123	Leonard Sheet Metal Works, Inc.	156
Fiat Metal Mfg. Co.	135	Lincoln-Schluter Machinery Co.	152
Fink & Sons Co., Inc., Louis.	176	Linocrusta-Walton Co.	117
Fischer Spring Co., Charles.	141	Living Stone Co.	174
Fisk Tire Co., Inc.	178	Lufkin Rule Co.	148
Foley Saw Tool Co.	143		
Fort Wayne Engineering & Mfg. Co.	162	McGraw-Hill Book Co.	163
Frantz Mfg. Co.	3	McKinney Mfg. Co.	16
Frazier Stain Co.	150	Macomber Steel Co., The.	152
Gallmeyer & Livingston Co.	146	Majestic Company, The.	58
Garden City Plating & Mfg. Co.	175	Majestic Steel Cabinet Co.	173
Gas-O-Gen Corp.	128	Malleable Asphalt Co.	176
Geier & Bluhm.	175	Mallory Mfg. Co.	174
General Electric Co.	53	Marietta Mfg. Co.	145
General Insulating & Mfg. Co.	155	Marschke Company, The.	177
Genfire Steel Co.	136	Martin, T. W.	176
Gibbs Boardtite Co.	167	Mason Fibre Co.	22
Gibsonburg Lime Products Co.	55	Master Rule Mfg. Co., Inc.	170
Gilbert & Bennett Co.	166	Master Woodworker Mfg. Co.	161
Goodell-Pratt Co.	159	Matot Co., D. A.	172
Goodyear Tire & Rubber Co.	30	Mesker & Co., George L.	164
Gowling, F. H.	174	Metal Forms Corp.	173
Grand Rapids Hardware Co.	155	Miami Cabinet Co.	163
Gurley, W. & L. E.	174	Miles Mfg. Co.	169
Hagstrom Mfg. Co.	173	Miller & Gleason.	174
Hardin-Lavin Co.	159	Milwaukee Corrugating Co.	182
Hart & Hegeman Mfg. Co.	171	Missouri Portland Cement Co.	43
Hess Warming & Ventilating Co.	152	Morton Mfg. Co.	170
Heston & Anderson.	175	Muller, Inc., Franklyn R.	149
Higgins Co., Charles M.	160	Myers & Bro. Co., The F. E.	154
Higgin Mfg. Co.	122	Myers, J. C.	174
Hild Floor Machine Co.	176		
Hitchings & Co.	133	National Fireproofing Co.	52
Hobart Brothers	166	National Mfg. Co.	184
Holland Furnace Co.	37	National Radiator Corp.	46
HoltBid Service Company.	113-114-115-116	National Sanding Machine Co.	161
Hopson Co., W. C.	171	National Sheet Metal Roofing Co.	175
Hotel Belvedere.	170	North Brothers Mfg. Co.	158
Hutchinson Mfg. Co.	167	North Western Expanded Metal Co.	180
Huther Bros. Saw Mfg. Co.	134		
Indiana Limestone Co.	8-9	Oak Flooring Bureau.	164
Insulite Co., The.	36	Overhead Door Corp.	20
International Casement Co., Inc.	177		
International Correspondence Schools.	151	Paramount Electric Co.	172
International Harvester Co.	121	Parks Woodworking Machine Co.	45
International Steel & Iron Co.	134	Peerless Mfg. Co.	141
Jaeger Machine Co.	169	Penn-Greg Co.	166
Johns-Manville Corp.	111	Porter Cable Machine Co.	158-176
Johnson & Son, S. C.	103	Progressive Mfg. Co.	177
Jones Superior Machine Co.	177	Pullman Mfg. Co., Inc.	164
Karol & Sons Co., B.	172	Pyramid Metals Co.	168
Kawneer Co., The.	27		
Radford Architectural Co.	39-40-41-42	Ransome Concrete Machinery Co.	18
Reading Iron Co.	140	Reading Iron Co.	140
Redybord Co., Inc.	164		
Zouri Drawn Metals Co.	54		

NOTICE TO ADVERTISERS

Forms for the January number of the American Builder will close promptly on December 10. New copy, changes and orders for omissions of advertisements must reach our business office, 105 W. Adams St., Chicago, not later than the above date. If new copy is not received by the 10th of the month preceding date of publication the publishers reserve the right to repeat last advertisement on all unexpired contracts.

Much of the Beauty of Fine Plastering is in Straight, Carefully Molded Corners— Protect Them



No. 1 No. 2
Expansion Corner Beads



MILCOR

Manual, a Data
Book on Metal
Lath is sent to
Contractors
and Build-
ers free.

Because it is relatively easy for the plasterer, working with Expansion Corner Beads, to form sharp corners, straight as a die, less time is required, costs are reduced and better results obtained. The expanded metal mesh provides a perfect base for plaster to key to close up to the bead, holding it there while the bead protects it. The appearance of fine plastering is never marred by disfigured corners, where Milcor Expansion Corner Beads are used.

Write for our Plaster Style Book "Modern Modes in Better Plastering".

MILWAUKEE CORRUGATING CO., Milwaukee, Wisconsin

CHICAGO, ILL.
Boston, Mass.

KANSAS CITY, MO.
Atlanta, Ga.

LA CROSSE, WIS.
Detroit, Mich.
Minneapolis, Minn.

MILCOR PRODUCTS
STAY-RIB METAL LATH NO. 1

....Have the Hardware for Every Job Right Before You

YOU can save a lot of time and trouble when deciding upon the kind and estimating the cost of hardware to be used on a new building or remodeling job if you have a FrantZ Wall Hanger before you.

The Line of FrantZ Guaranteed Builders' Hardware is fully illustrated and described on this attractive hanger that should be hung in a conveniently seen location in your office.

FrantZ Products are made of high quality materials and with skilled workmanship. You will find long wear and convenience features combined in the design of every item—features that make this Line of Hardware worthy of the guarantee behind it—features that make the Hardware have outstanding value.

Send for *your* copy of this Wall Hanger today! Use the Coupon below.

FRANTZ MFG. CO.
STERLING ILLINOIS



*No Hardware
Is Genuine*

**FRANTZ
QUALITY**
*Without the
Red Label*

FRANTZ MFG. CO.
Dept. A-129, Sterling, Illinois

Kindly send me a copy of the Wall Hanger which
illustrates and describes the Line of FrantZ Guaranteed Builders' Hardware.

NAME _____

ADDRESS _____

CITY _____

STATE _____

*Send for Your
Copy of this
Wall Hanger
Today!*

